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ABSTRACT

Exercises are provided in this set of four workbooks designed to aid students in health occupations programs in building vocabulary and reading skills. Each workbook borrows from the vocabulary of the health sciences to provide explanations and exercises for a sequential series of instructional objectives. One workbook concentrates on developing the ability to determine word meanings through contextual inference. Exercises in this booklet are designed to demonstrate the variety of meanings a word can have in different contexts, and to caution students about the limitations of using context clues to determine word meaning. Another workbook helps students recognize and define suffixes and prefixes common in science terminology. Special emphasis is placed on using word parts to define words with which students may not be familiar. A third workbook presents exercises which help the student make efficient use of the dictionary, by reinforcing the student's understanding of alphabetical order and of the components of a dictionary entry. The fourth workbook discusses and illustrates learning strategies to be used by the student in mastering technical vocabulary encountered in reading assignments. Accompanying the exercises in these four workbooks are pre- and post-tests designed to help students assess their progress in relation to each of the instructional objectives covered. (JP)

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PERSONAL ACHIEVEMENT

READING

Health Occupations

Prepared by

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Fund for the Improvement of Postsecondary Education

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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1977

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PERSONAL ACHIEVEMENT

READING

Health Occupations

Clues to Word Meaning

PRE/POST TEST
CLUES TO WORD MEANINGS

Obj. 1

Select the appropriate meaning for common words according to the context in which they are used. 80% = mastery

1. The doctor said the operation was a success.

   a) business system
   b) surgery
   c) running of a machine
   d) amputation

2. The smog alert lasted three days.

   a) awake
   b) a warning
   c) to warn someone
   d) small animal

3. The mechanic said the part hadn't come in yet.

   a) separate
   b) role in a play
   c) piece of equipment
   d) leave

4. The plant grew two new leaves this week.

   a) factory
   b) vegetation
   c) put in the ground
   d) salad

5. I tried to nurse the baby bird back to health.

   a) sip slowly
   b) hand bag
   c) a person in the medical field
   d) care for and heal

Obj. 2

Select the correct meaning of the underlined word by using the context clues. 80% = mastery

1. When I first went to Russia, dissident voices were silent. Today there are a few that are outspoken, and others that are not.

   a) disagreeing
   b) friendly
   c) dangerous
   d) religious

2. The inevitable trend is automation. Someday a jet liner will be built that will fly itself from take off to touch-down.

   a) slow
   b) certain
   c) scary
   d) rapid

3. Those wetlands teem with geese. In the fall, when the Canada geese leave, the whole landscape seems to take off.

   a) pain up
   b) are noisy
   c) play games
   d) are full of

4. Eventually the anti-metric feeling died away. Great Britian began conversion to the metric system in 1965.

   a) change to
   b) legalize
   c) do away with
   d) campaign for

5. The Federal Republic of Germany has emerged as Western Europe's strongest most prosperous nation. How did it happen?

   a) won
   b) fought
   c) appeared
   d) disappeared

Obj. 3

Write the correct meaning of the underlined word by using the definition clues. 80% = mastery

1. The portal, on door, swung open wide.
   meaning of portal _____

2. The sedating drug began to have an effect, since the patient grew quiet and sleepy.
   meaning of sedating _____

3. The schedule for the day precluded playing tennis; there just wasn't enough time.
   meaning of precluded _____

4. Origami, or paper folding, is an old art.
   meaning of origami _____

5. Her absence caused total chaos. Everything was in a confused mess.
   meaning of chaos _____

Obj. 4 [NOT APPLICABLE TO AUTO REPAIR]

Write the correct meaning of the underlined word by using the example clues. 80% = mastery

1. Duplication machines, such as a ditto master or a thermo fax speed up office processes to a great extent.

   meaning of duplicating machines _____

   examples of duplicating machines _____

2. Raw crops such as corn and soybeans are a mainstay to Iowa's economy.

   meaning of raw crops _____

   examples of raw crops _____

3. Power tools like a hydralic jack or an air wrench are a necessity for a good auto mechanic today.

   meaning of power tools _____

   examples of power tools _____

4. Food additives such as cyclamates, and saccharin are prohibited by the FDA.

   meaning of food additives _____

   examples of food addictives _____

5. Emphysema and asthma are examples of respiratory ailments.

   meaning of respiratory ailments _____

   examples of respiratory ailments _____

Obj. 5 [NOT APPLICABLE TO AUTO REPAIR]

Write the correct meaning of the underlined word by using contrast clues. 80% = mastery

1. Unlike the trim lightweight Danish furniture, some of the old Victorian furniture is ponderous.
   ponderous means _____

2. While Jim is a rather lethargic individual, his brother Matt is energetic, alert, and always on the go.
   lethargic means _____

3. In contrast to some modern dissonant jazz, old time jazz was melodic and harmonious.
   dissident means _____

4. Sam wanted to consolidate the two businesses into one, whereas Joe wanted to keep them seperate.
   consolidate means _____

5. The President wanted total and immediate withdrawal of all troops. On the other hand, the Secretary favored more gradual phase out of the troops.
   phase out means _____

Obj. 6 [NOT APPLICABLE TO AUTO REPAIR OR BUSINESS]

Write the correct meaning of the underlined word by using the inference clue. 80% = mastery

1. After he was hung, his name was exonerated when his family proved he had been innocent.

   a) cleared
   b) forgotten
   c) hated
   d) revered

2. There will be sufficient food as soon as the crops are harvested.

   a) scarce
   b) too much
   c) enough
   d) an absence of

3. The pantomime artist must exaggerate every movement to make it seem larger than life.

   a) act out
   b) practice
   c) hide
   d) overdo

4. The filth and poverty in that slum was deplorable.

   a) moderate
   b) going away
   c) pitiable
   d) increasing

5. Human rights have become a major aspect of U.S. foreign policy.

   a) problem
   b) part of
   c) army
   d) love

Obj. 7 [OBJ. 4 FOR AUTO REPAIR, OBJ. 6 FOR BUSINESS]

Identify the reference pronouns and their referents in the following sentence. 80% = mastery

1. The bags contained gold jewelry, and they were missing the morning after the robbery.

   pronoun _____ referent _____

2. Many people have given all they had in the fight for freedom.

   pronoun _____ referent _____

3. If it hails now, the farmers are likely to loose most of the crops, but they can apply for crop damage insurance.

   pronoun _____ referent _____

4. The forest was turned to a charred battlefield as the fire consumed it.

   pronoun _____ referent _____

5. The machine wore out because it hadn't been given the proper maintenance care.

   pronoun _____ referent _____

Obj. 8

[OBJ. 7 FOR BUSINESS, OBJ. 5 FOR AUTO REPAIR]
100% correct = mastery

Write two (2) limitations of using context clues in determining word meaning.

1.

2.

ANSWER KEY
PRE/POST TEST
CLUES TO WORD MEANINGS

Obj. 1

1. B
2. B
3. C
4. B
5. D

Obj. 2

1. A
2. B
3. D
4. A
5. C

Obj. 3

1. door
2. quieting, calming
3. ruledant, eliminated
4. paper folding
5. total confusion

Obj. 4

1. machines that duplicate on copy
   - ditto master, thermofax
2. crops grown in rows
   - corn, beans
3. tools that use external energy
   - hydralic jack, power wrench
4. chemicals added to foods
   - cyclamates, saccharin
5. lung problems
   -emphysema, asthma

Obj. 5

1. huge, heavy
2. sluggish, slow
3. harsh, discordant
4. merge
5. elimination

Obj. 6

1. A
2. C
3. D
4. C
5. B

Obj. 7

1. they - bags
2. they - people
3. they - farmers
4. it - forest
5. it - machine

Obj. 8

1. The context sometimes doesn't always reveal the words meaning.

2. The context may mislead you about a words meaning.

CLUES TO WORD MEANING: HEALTH OCCUPATIONS

		Page
OBJECTIVE 1:	Select the appropriate meaning for ten common words, according to the context in which the words are used.	2
	Self Post-Test	4
OBJECTIVE 2:	Determine the meaning of eight out of ten given words by using context clues.	5
	Self Post-Test	7
OBJECTIVE 3:	Determine the meaning of nine out of ten given words by using definition clues.	9
	Self Post-Test	10
OBJECTIVE 4:	Determine the meaning of nine out of ten given words by using example clues.	12
	Self Post-Test	13
OBJECTIVE 5:	Determine the meaning of nine out of ten words by using contrast clues.	16
	Self Post-Test	17
OBJECTIVE 6:	Determine the meaning of ten given words by using inference clues.	20
	Self Post-Test	21
OBJECTIVE 7:	(a) Identify reference (pronoun) clues and (b) identify the referents of pronouns in nine out of ten sentences.	23
	Self Post-Test	24
OBJECTIVE 8:	Name two limitations of using context clues in determining word meaning.	27
	Self Post-Test	28

CLUES TO WORD MEANING

By itself, a word does not have a clear, precise meaning. Suppose someone were to ask you the meaning of "field". You wouldn't be able to answer because "field" as presented to you does not have a clear, definite meaning. But, if that person were to say "cornfield" you would immediately know he/she is talking about an area of land where corn is raised. If, on the other hand, someone says, "Wow, he can really field that ball!" you would know that in this context "field" means to catch a ball.

The sentences or words surrounding a particular word are called the context. The context can give you the meaning not only of familiar words like "field", but also of new or difficult words. The writer frequently gives the meaning of a new word in the same paragraph or near by so that you don't have to go as far away as a dictionary or even a glossary to find definitions while you are reading.

In this unit you will work on:

(1) special meanings for commonly used words and

(2) getting meanings of words from the context.

When you learn these skills, you will enlarge your vocabulary and become a better reader.

OBJECTIVE 1

You will be able to select the appropriate meaning for ten common words, according to the context in which the words are used.

STRATEGY

A word may have more than one meaning. Its meaning depends on the way it is used. Take "hit" for example. A "hit" is what a baseball player gets if his bat connects with the ball; you can "hit" someone else (provided you're bigger than they are) or you can "be a hit" (popular, well received) if you do something everyone else admires.

A "hit" can also be a popular song, a new recipe or a movie--anything very successful. A teacher may only have time to "hit" the high spots in one class period; your father may "hit" the roof when you're late getting home, or a friend may "hit" you for a $5.00 loan.

Have you ever "hit" the books, "hit" the hay or better yet, "hit" the jackpot? The definition of "hit" all depends on the context it's used in.

A. You have seen and used all of the following words. Each word has multiple meanings, some of which we don't use as often as others. See how many different ways you can use each word. Trying them in sentences may help you. For example, use the word "stick":

1. A "stick" is a piece of wood.

2. You can "stick" (poke) someone in the ribs.
3. A nickname will often "stick" with a person as he/she grows older.
4. Would you care for a "stick" of gum?

There are many more meanings for "stick". Can you add others to this list?

Now try these. See how many different ways you can use each word.

1. set
2. book
3. pot
4. spring
5. bear

Here are some that are more difficult. They are words which have a special meaning in the context of medical vocabulary. See if you can think of at least two different meanings for each, then check your answers to see if you have a medical definition. You may use a dictionary if necessary.

1. patient _____ _____
2. cold _____ _____
3. sterile _____ _____

4.	sign	_____	_____
5.	drape	_____	_____
6.	position	_____	_____
7.	jacknife	_____	_____
8.	abortion	_____	_____
9.	organ	_____	_____
10.	compress	_____	_____
11.	history	_____	_____
12.	murmur	_____	_____
13.	pack	_____	_____
14.	tablet	_____	_____

As you read your class textbooks, watch for familiar words used in unfamiliar ways.

When you have completed these definitions, see your instructor for a post-test covering them.

OBJECTIVE 2

You will be able to determine the meaning of at least nine (9) given words by using context clues.

STRATEGY

Not only does the context decide the meanings of familiar words, but it also gives you an idea of the meanings of words you don't know or haven't seen before.

Often you can tell the meaning of a word by reading the words around it. When you come to a new word read to the end of the sentence (or paragraph) to see if you can figure out the meaning.

EXAMPLE: Glumpf (This is a made-up word. See if you can figure out its meaning.)

a. Fred is very good in glumpf.

(We don't know the meaning of this sentence because we don't know the last word. Go on to the next sentence.)

b. He was in glumpf league last summer.

(There are two clues given in this sentence. What are they?)

1) _____ 2) _____

c. He can throw a glumpf so slow that you can count the stitches.

(Glumpf hasn't changed; we've only surrounded it with different words.)

d. Last year he visited the Glumpf Hall of Fame in Cooperstown, New York.

(What is the new clue given here? _____)

e. From the clues given in the above sentences we know that glumpf means _____. (Fill in the blank.)

> **REMEMBER:** Think about all the words you know to see if you can figure out the words you don't know.

Now see if you can figure out the meaning of the underlined words in these sentences by using the context. The questions in parentheses will help you think through the process.

a. The deep-sea diver used a special searchlight to help him see in the murky waters.

(What would a deep-sea diver use a searchlight for?)

b. The balloon ascended to a height of six hundred feet.

(What would a balloon have to do to reach 600 feet?)

c. The fire was extinguished with a special kind of liquid foam.

(What might liquid foam do to a fire?)

murky means _____

ascended means _____

extinguished means _____

The examples above have the most obvious type of contextual clue--there can be no doubt about the meanings of the words. You only had to use common sense or recall an experience you have had or read about to decide the meanings. We know from experience how people and things act in a given situation. Consequently we can come close to figuring out the meaning of the word by looking at the situation (the whole sentence) and recalling what a logical outcome would be.

Here is another example of a common sense context clue. Can you tell what magnify means in the sentence below?

The microscope is of the utmost importance in the study of biology because it can magnify objects too small to be seen by the naked eye.

(What is a microscope used for? For enlarging or making things which are usually too small to be seen look bigger. Therefore, magnify means to make things look larger.)

Here are some "common sense" and "common experience" contexts. Each sentence contains a clue or clues to the meaning of the underlined word. Decide the meaning by using common sense or recalling some experience you know about, as in the examples above. Then choose the best meaning for the word according to the context.

____ 1. The basketball game was a fiasco, with our team scoring 21 points to their 104.

(a) success
(b) disaster
(c) challenge

____ 2. The heart attack victim was resuscitated through the use of mouth-to-mouth breathing.

(a) brought back to consciousness
(b) forced to lie down
(c) helped to his feet

____ 3. During those first confusing days, the thoughts of a new student at Kirkwood drift back to high school or home where she was "in", knew everyone and felt comfortable. A feeling of nostalgia sweeps over her.

(a) delight
(b) sadness
(c) homesickness

Although (b) is a possible answer, (c) is the best answer because it is more specific in terms of the sentences given here. As you can see, the context clue is sometimes in front of the word.

Use the context to determine the meanings of the following underlined words:

d. We had no use for our flashlights; the moon illuminated our path very clearly.

illuminated means _____

e. I cannot tell you a secret unless you promise not to divulge it.

divulge means _____

f. President Franklin D. Roosevelt died in 1945, and his wife in 1962; she survived him by seventeen years.

survived means _____

g. Farmers will be in trouble unless the drought ends soon; it hasn't rained in six weeks.

drought means _____

h. The speaker should have used a microphone. His voice was inaudible, except to those near the platform.

inaudible means _____

i. At one point during the hurricane, the winds reached a velocity of 130 miles an hour.

velocity means _____

j. The hot rod race ended in a tie when Paul in "Blue Lightening" and Andy in the "Yellow Streak" crossed the finish line simultaneously.

simultaneously means _____

Check your answers with the answer key. If you got 9 or more correct, go on to the next objective. If you missed more than one, see your instructor.

OBJECTIVE 3

You will be able to determine the meaning of nine (9) out of ten (10) given words by using definition clues.

STRATEGY

Sometimes authors realize they have used words you, the reader, may not know. In that case they may give an outright definition or explanation of its meanings to help you. In other words, a definition of a difficult word may be clearly stated in the same sentence or at least the same paragraph.

EXAMPLE #1: An ecologist, a scientist who specializes in the relationship between living things and their environment, is likely to have authoritative opinions on the problem of pollution vs. man's survival.

a. The definition (underlined twice) of ecologist is clearly "an expert on environmental relationships". Here the clue (the definition) is close to the word and is "signalled" by commas on each side of the definition. (Sometimes the word "or" is used as well as the commas.)

b. A definition or explanation clue is also often indicated by a form of the verb "to be" as in this example: (the clue is underlined twice)

EXAMPLE #2: The development of the laser--that is, a device which concentrates high energies from radiation into a narrow, sharply focused beam of light--has practical applications in medicine.

EXAMPLE #3: Indian paint brush is a type of showy herb that grows in the southwestern United States.

c. Sometimes a definition clue appears in the form of description. Again, a form of the verb "to be" is usually used.

CAUTION: Be sure the description is a fairly precise one before you rely on it for a definition. This sentence, "A gazelle has four thin legs and is very nimble-footed," is too general and vague to be a definition.

However, Example #4 is a more precise description, and therefore a good definition.

Example #4: The griffin was a mythological monster with an eagle's wings, head, beak and a lion's body, legs and tail.

In the following sentences use the definition clues to decide the meanings of the underlined words. Then write those meanings on the blank lines.

1) "Therefore, the net force, or filtration pressure, represents the glomerular pressure."

2) "We must all soon learn how to compute in the metric system which is a decimal system of weights and measures universally used in science."

3) "In all these examples, you are observing how plants and animals do their work or, in other words, their behavior."

4) "The simplest of all reproduction methods, with only one parent, is asexual reproduction."

5) "The inner part of the ear is very appropriately called the labyrinth, because it is composed of a group of interconnected canals or channels."

6) "A ring-shaped sinus draining the anterior chamber of the eye, the sinus venosus sclerae, is located within the sclera."

7) "The kidneys are bean-shaped organs lying behind the parietal peritoneum."

8) "One clue is given by metabolism tests which measure the rate at which the chemical and physical processes in the body are carried on and at which energy is produced and utilized."

9) "Yet science has solved many difficult problems and this is surely a problem of great interest to all of us. As good a way as any to start on the puzzle is to make a sort of guess, a hypothesis, as to how the sun's family might have begun and to see how it works."

10) "As you have seen, living things must produce offspring to continue to live. Another name for producing offspring is propagation."

Each question above has two parts. If you missed more than two parts altogether (out of the 20 possible) see your instructor. Otherwise, go on to the next objective.

OBJECTIVE 4

You will be able to determine the meaning of nine (9) out of ten (10) given words by using example clues.

STRATEGY

A. Examples are frequently used to provide a meaning within a context. Words which sometimes indicate this clue are:

like	such as	for example
especially	this	these
other	in that way	

EXAMPLE #1: Methadone is an example of a synthetic narcotic drug.

EXAMPLE #2: Substances like hydrogen and oxygen that cannot be changed into component substances are called elements.

B. In Example #2 the meaning of "element" is made clear by two clues, an example clue ("like hydrogen and oxygen") and a definition clue ("substances that cannot be changed into component substances"). This combination is common in science books especially, since the writers are eager to emphasize and make certain ideas very clear and precise. In fact, many of the examples for this practise as well as others in this unit were taken from Structure of Man, required reading for most health occupations.

In the following practises, identify the example of the underlined word. Then write your definition of the underlined word (determined by using the example clue.)

1. Girls on the average consistently do better in the test items involving esthetic response such as matching colors and shapes and discriminating in pictures.

   example of esthetic response _____

   meaning of esthetic response _____

2. Probably you have up to this moment taken your arms and hands for granted without ever thinking how wonderful they are. You probably have never considered how much these organs help to make you different from ordinary animals.

   example of organs _____

   meaning of organs _____

3. Wonderful as are your flexible arm and hand, they are no more wonderful than certain other organs which help you to be the cultural animal.

   example of organs _____

   meaning of organs _____

4. Milk contains so many different kinds of nutrients that it is almost a complete diet within itself for small children. Although adults can live on it for weeks at a time, milk does not contain all the elements essential to human diet, and even infants usually develop better when they have some food besides milk.

   example of nutrients _____

   meaning of nutrients _____

5. We have today many means of communication, especially language, that enable us to reach out to the whole world past and present for ideas worth learning.
   example of means of communication _____
   meaning of means of communication _____

6. The boys were lying still, heads down, inert, like dead men except for their loud and broken gasps for air.
   example of inert _____
   meaning of inert _____

7. The most serious shortcoming a hopeful nurse could have in terms of personality would be a lack of friendliness, especially a smile.
   example of personality _____
   meaning of personality _____

8. Groups of pyramical cells in the cortex corresponding to motor controls of various parts of the body are referred to as cerebral localization sites. These motor areas are arranged in inverted order, commencing with the center for movement.
   example of cerebral localization sites _____
   meaning of cerebral localization sites _____

(9) "The relation of the cancer cell to neighboring cells in the body is altered. It has recently been shown, for example, that normal skin cells stick together and stop growing when they touch one another, while cancer cells in a solid tumor move about randomly and do not stop growing on contact with other cells."

meaning of altered _____

(10) I took an axe and smashed a few of the wooden rungs, much like heavy broomsticks, that are used to bar the boxes in which the gorillas are caged.

meaning of rungs _____

Did you get at least nine of the sentences completely correct? Good! Go on to the next objective.

If you made more than one mistake, see your instructor for further explanation.

OBJECTIVE 5

You will be able to determine the meaning of nine (9) out of ten (10) given words by using "contrast clues".

STRATEGY

A clue to the meaning of a word can sometimes be found in an opposite word (antonym) or a contrasting idea. In using contrast clues to get an idea of the meaning of a word, you may have to search several sentences in front of and/or behind the word.

EXAMPLE #1: Although Mr. Manson guzzled liquor in great quantities every evening, his *sobriety* was without question during the business day.

Clue: How does drinking great quantities of liquor usually affect a person? That person becomes drunk. What word indicates that Mr. Manson was *not* affected in the normal way?

_____

Meaning: The context clue here is *although*, which shows contrast. From this clue we know that sobriety means "sober" or "not drunk".

EXAMPLE #2: The *flaccid* condition of his body was unlike that of Jim, who now exercises daily, watches his diet and has become thin and wiry.

Clue: unlike Jim's good physical condition

Meaning: out of shape

Example #3: When the light brightens, the pupils of the eyes contract; when it grows darker, they dilate.

Clue: condition is the opposite of contract (to become smaller)

Meaning: become larger

B. Each of the following passages contains a "contrast clue." Below each passage write:

(1) the clue that led you to the meaning of the underlined word, and

(2) the meaning itself.

HINT: The following words are usually clues to contrasting or opposite ideas:

but	meanwhile	although
yet	not withstanding	however
on the contrary	or	on the other hand
nevertheless	otherwise	

1. The medical assistant tried reading the doctor's note but found it illegible. However, the nurse's was easy to read.

Meaning of illegible: _____

Clue: _____

2. Although Dr. McGarvey is usually late in arriving at the office, he is punctual with his hospital rounds.

Meaning of punctual: _____

Clue: _____

3. The only extemporaneous talk was Karen's; all the other nurses gave memorized presentations.

Meaning of extemporaneous: _____

Clue: _____

4. "Bye-bye" may be a suitable ending for a telephone conversation with a friend; nevertheless, it is completely inappropriate for a doctor's office.

   Meaning of inappropriate: _____

   Clue: _____

5. The doctor's gown was immaculate before surgery, but when he finished operating it was blood-spattered and dirty.

   Meaning of immaculate: _____

   Clue: _____

6. She expected the cough medicine to relieve her cough; however, on the contrary, it seemed to aggravate it.

   Meaning of aggravate: _____

   Clue: _____

7. When the medical assistants were instructed to run a blood test, they thought it was unwise of the instructor to make them do it; later, however, they saw it as a very astute move.

   Meaning of astute: _____

   Clue: _____

8. "The relation of the cancer cell to neighboring cells in the body is altered. It has recently been shown, for example, that normal skin cells stick together and stop growing when they touch one another, while cancer cells in a solid tumor move about randomly and do not stop growing on contact with other cells."

   Meaning of randomly: _____

   Clue: _____

9. "At comfortable room temperature water diffuses through the skin and evaporates as quickly as it is formed; thus, the skin appears dry. Sensible perspiration, on the other hand, refers to water appearing on the surface of the skin as a result of sweat gland activity."

   Meaning of sensible perspiration: _____

   Clue: _____

10. The sympathetic system makes the pupils larger, while the parasympathetic system contracts them.

    Meaning of contract: _____

    Clue: _____

Again, check your answers with the answer key. If you missed more than one meaning and/or clue, see your instructor. Otherwise, go on to the next objective.

OBJECTIVE 6

You will be able to determine the meaning of ten (10) given words by using inference clues.

STRATEGY

A. This kind of context clue is a little more difficult to identify, but is frequently used. You need to learn to "read between the lines" and gather details to figure out the meaning. You will also need to search the context both in front of and behind the unfamiliar word. This type of clue is actually a combination of several types of clues, but there are no specific "give away" words for it.

Example #1: Sharon told her roommate, "I'm through with blind dates forever. This one topped all! What a dull evening! I was bored every minute. The conversation was absolutely vapid!

Clue: dull evening, bored every minute, through with blind dates

Meaning: dull, uninteresting

Example #2: "The practicing physician as a rule is completely unskilled in dietetics. His preliminary training encompasses little or nothing concerning the details of food prescription."

If you pay close attention to the sentences in Example #2 you will be able to infer that the second sentence is a slightly changed restatement of the first. From this you can conclude that dietetics has something to do with "details of food prescription." While you by no means have a full definition of dietetics, you do have enough of a meaning to go on reading.

B. Each of the following passages has an inference clue which will give you an idea of the meaning of the underlined word. Read each sentence carefully, then choose or write that meaning in the space below.

1. The odd combination of a breeze and a bright light can also cause sneezing. A skeptical veterinarian once set out to disprove this.

   The word closest in meaning to skeptical is:

   a. renowned
   b. typical
   c. doubting
   d. believing

2. "During oogenesis and spermatogenesis, the processes by which male and female gametes are formed, a reduction of chromosomes occurs in each sex cell so that the gametes contain a haploid number of chromosomes."

   The word closest to haploid in meaning is:

   a. greater
   b. huge
   c. fewer
   d. unknown

3. The biotic community includes the plant and animal life within an area.

   Meaning of biotic: _____

4. "We can learn a great deal about human inheritance. For example, we know that some parents produce offspring whose blood cannot clot. They have hemophilia."

   Meaning of hemophilia: _____

5. To abate the pain, the doctor gave the patient a shot of novocain.

   Meaning of abate: _____

6. "Medical Center" on Channel 9 Monday nights, is not a true story; the incidents and characters are entirely fictitious.

   Meaning of fictitious: _____

7. The behaviorist movement gaining force in the twenties turned many persons towards the belief that virtually all human traits were "conditioned" and made suspect any evidence of basic or inborn differences. (The clue here is an opposite)

   Meaning of conditioned: _____

8. And his consecutive games record went on and on. Sick or well, he never missed a game.

   Meaning of consecutive games record: _____

   _____

9. "With the greatest weaklings eliminated in the early stages, the subsequent male mortality becomes smaller. Yet in the fourth month the male death rate is more than double that of the female, and in the last two months about thirty per cent higher."

   Meaning of male mortality: _____

10. "Dialogue gives sparkle and life, but it can easily be overdone. Do not employ it for trivialities; do not let it become mere patter. Use it for important and critical encounters."

    Meaning of trivialities: _____

See your instructor upon completion of this section. He or she will check your answers on this part as answers may vary.

OBJECTIVE 7

(1) You will be able to identify reference (pronoun) clues and (2) you will be able to identify the correct referent of given pronouns in nine (9) out of ten (10) sentences.

STRATEGY

Another important context clue is the use of pronouns. Pronouns are words which replace nouns (persons or things). The noun is sometimes called the referent, the word to which the pronoun refers. Very often the referent is in a sentence before. Again, you will need to search the context. (For more explanation of referents, see IRS booklet A-J3.)

A. Identify what "they" refers to in each of the following sentences:

(1) Many more people now live near the Delaware River. They have built many cities and factories.

"they" refers to: _____

(2) The sewage and the chemicals have changed the water. They have polluted it.

"they" refers to: _____

(3) Fish cannot live in the polluted water. They have all died.

"they" refers to: _____

B. Be careful to specify the correct referent when you are deciding which noun the pronoun is replacing. The word "they" in sentences 2 and 3 which follow refers to something in sentence 1.

(1) All atoms of gold are alike.

(2) They have the same kind of nucleus.

(3) They have the same number of electrons.

To what does "they" refer?

a. all atoms
b. all atoms of gold
c. gold

C. When pronouns replace nouns, the referent must be clear. What is the referent in sentence 1 below for the pronoun "it" in sentence 2?

_____

(1) A system of pulleys can raise the car's engine from its mounting by exerting a force which is smaller than the weight of the engine.

(2) It exerts a smaller amount of force over a large distance.

"It" refers to:

a. the weight of the engine
b. the car's mounting
c. a system of pulleys

D. Indicate the correct referent (noun) that the underlined pronoun stands for in each of the following passages:

(1) Both hail and sleet are solid, frozen forms of precipitation. The former is produced when raindrops freeze as they pass through sub-freezing air layers on their way to earth. The latter is formed when snowflakes melt into rain and then refreeze into sleet.

To what does "the former" refer? _____

To what does "the latter" refer? _____

(2) "The thyroid is one of the most sensitive organs of the body. During puberty, pregnancy, and physiologic stress it increases in size, becoming more active."

"It" refers to:

a. puberty
b. physiologic stress
c. thyroid
d. pregnancy

(3) We can learn a great deal about human inheritance. For example, we know that some parents produce offspring whose blood cannot clot. They have hemophilia.

"They" refers to:

a. parents
b. children of the parents
c. all humans

(4) (This example was taken from a Health Occupations math problem.)

" To make this amount of solution, we should inject 5 ml. of sterile solution into the vial of pencillin powder. After it dissolves, we must withdraw 1 ml. of the solution and administer it IM."

"It" refers to: _____

5. "Since the body will not produce any calories from salin solution, it has no effect upon the total number of calories given."

   "It" refers to: _____

6. "The thyroid is one of the most sensitive organs of the body. During puberty, pregnancy and physiologic stress it increases in size, becoming more active."

   "It" refers to: _____

Check your answers with the answer key. If you missed more than one see your instructor.

Otherwise, go on to Objective 8.

OBJECTIVE 8

You will be able to name two limitations of using context clues in determining word meaning.

STRATEGY

You have learned that the context often gives hints of the meaning of words. However, it is also important to realize that:

(1) the context sometimes has nothing at all to reveal about a word's meaning, and

(2) the context may mislead you about the word's meaning.

A. What does the context of the following sentences lead you to conclude about the underlined words? Is your conclusion correct in each case?

(1) "Corbett had lived in this noisome slum for only two weeks, but he would never forget the screaming voices, the angry quarreling, and the fighting that made slum life so unbearable."

Your intelligent guess at the meaning of noisome:

_____

(2) "He was livid with rage."

Your intelligent guess at the meaning of livid:

_____

In these examples the context is a real fooler!

In sentence (1), both the context of the word noisome and also its structure suggest the meaning noisy. Upon using a dictionary, however, you will find the meanings offensive, distasteful, disgusting, ill-smelling. The word noisome comes from the same root word as annoy and is in no way related to noise.

In sentence (2), did you think livid meant red or flushed? It is a logical "guess" since you have probably seen people turn red with anger. However, the dictionary gives the meanings lead color, ashen, pallid and ghastly.

B. What help can you get from the context in these sentences?

"The women had an in-depth discussion of philately that lasted well into the night. Their interest in the subject was so keen that they were unaware of the passage of time."

This is an example of a context which provides no clues to the meaning of the word. You must either already know the meaning of philately and then make sense of it in the context, or you must turn to an outside source--a teacher, a knowledgeable friend, or a dictionary.

SELF POST-TEST

C. Without looking back, name two limitations of using context clues.

1. _____

2. _____

Check your answers with the "Strategy" under Objective 8. If you missed either one, reread the examples under Objective 8 and see your instructor for further explanation if you have questions.

D. As one teacher has wisely stated,

"Context is a magnificent help---BUT BEWARE!"

Here is a chart of guidelines for using context clues. You will probably arrive at some of your own as you read and use this technique.

DO'S AND DON'TS FOR USING CONTEXT

Do rely on context clues:

1. When you have a definite "unmissable clue"--a definition or direct explanation in the same paragraph.
2. When you have "highly reliable clues"--key words as explained in Objectives 2-6.
3. When you only need a general idea of what the word means.

Don't rely on context clues:

1. When you need an exact, definite meaning. (Context clues only give a general idea of the meaning of the word.)
2. When you don't know the meanings of the words nearby.
3. For technical words--key vocabulary which you are expected to know in your program or occupation.
4. When the word is a very important one--a key to the meaning of the whole sentence or paragraph.
5. When you have come across the word many times; if it is common in the materials you're reading, you'll want to learn it's meaning completely for future reading.

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ANSWER KEY
CLUES TO WORD MEANING
HEALTH OCCUPATIONS

j. 1

Please stick to the point
This glue will not stick
Any others that are appropriate
Has the table been set?
Set of tennis
Mathematical sets
To be set in bridge
Book an engagement
A book of matches
Make book
A book is a volume of reading material
Smoke pot
Pot of gold
Pot belly
Pot a plant
Spring is a season
Spring is a source of water
A cat will spring at a mouse
Box springs
One can bear to the left
Grizzly bear
Bear children
Bear gifts

1. willing to wait/person being treated by a doctor
2. low temperature/a common cold
3. not able to produce children/free from all contaminants
4. signal/life sign
5. window dressing/cloth to cover patient in examination
6. place/put a certain way for examination
7. small knife/specific examination position
8. ending a procedure/terminate life of a fetus
9. musical instrument/specialized body structure
10. make smaller/a poltice applied for relieving inflamation
11. study of the past/patients medical history, or background
12. slight noise/misfunction of the heart
13. bundle up/moist application to part of the body
14. sheets of writing paper/dosage of medication

j. 2

1) league
2) summer
Hall of Fame in Cooperstown, New York
baseball
rky means cloudy
cended means goes up
tinguished means put out
b
a
c

d. lighted
e. give away, reveal
f. out live
g. lack of moisture
h. not hearable
i. speed
j. at the same time

j. 3

net force
decimal system of weights and measures
actions
one parent reproduction
maze, interconnected canals
ring-shaped sinus
organs
test to measure the rate of chemical and physical processes
a guess
producting offspring

Obj. 4

1. matching colors and shapes
   taste on preference
2. arms
   parts of your body
3. arms and hands
   parts of your body
4. milk components
   beneficial part of food
5. language
   method to present ideas
6. like dead men
   still
7. friendliness
   characteristics
8. center for movement
   pyramical cells in the cortex
9. changed
10. wooden bars

Obj. 5

1. not readable/however
2. on time/although
3. unmemorized/all others
4. not suitable/nevertheless
5. clean/but
6. worsen/on the contrary
7. wise/however
8. in no pattern/while
9. sweat/on the other hand
10. makes smaller/while

Obj. 6

1. C
2. C
3. living
4. condition of non clotting blood
5. lessen
6. not real
7. learned
8. games in a row
9. male death rate
10. wooden bars

Obj. 7

A. 1. people
   2. sewage and chemicals
   3. fish
B. b
C. c
D. 1. hail, sleet
   2. thyroid
   3. b
   4. penicillin powder
   5. saline solution
   6. thyroid

Obj. 8

1) The context sometimes has nothing at all to reveal about a word's meaning.
2) The context may mislead you about the word's meaning.

PERSONAL ACHIEVEMENT

READING

Health Occupations

Learning Word Parts

Prepared by

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PRE/POST TEST
LEARNING WORD PARTS

Obj. 1

Obj. 2 for Auto Body Packet

Match the following prefixes with their meaning.
80% correct = mastery.

1.	____ bi-	a.	many
2.	____ demi-, hemi-, semi-	b.	thousand
3.	____ kilo-	c.	one
4.	____ milli-	d.	single
5.	____ mono-	e.	much, many
6.	____ multi-	f.	half
7.	____ poly-	g.	hundred
8.	____ centi-	h.	four
9.	____ quadri-	i.	thousand, a thousandth
10.	____ uni-	j.	two

Obj 2

Obj. 3 for Auto Body Packet

Obj. 2 and Obj. 3 combined for Data Processing, Ag., and Health Packets

Match the following prefixes with their meanings
80% correct = mastery.

1.	____ anti-, contra-	a.	wrong
2.	____ trans-	b.	under
3.	____ in-	c.	before
4.	____ auto	d.	against
5.	____ micro	e.	self
6.	____ inter-	f.	between
7.	____ mis-	g.	not, into
8.	____ post-	h.	across
9.	____ pre-	i.	small
10.	____ sub-	j.	after

ANSWER KEY

Obj 1

1.	j	6.	a
2.	f	7.	e
3.	b	8.	g
4.	i	9.	h
5.	d	10.	c

Obj. 2

1.	d	6.	f
2.	h	7.	a
3.	g	8.	j
4.	e	9.	c
5.	i	10.	b

PRE/POST TEST
LEARNING WORD PARTS

Obj. 3 for Business and Environmental Studies Packets

Obj. 4 for Data Processing, Ag., and Health Packets

Obj. 5 for Auto Repair Packet

Tell whether the following words are nouns, adverbs, or adjectives.
80% correct = mastery.

1. situation -
2. slowly -
3. graphic -
4. capably -
5. dentist -
6. tolerance -
7. famous -
8. cheerfully -
9. selfish
10. acidity

ANSWER KEY

1. noun
2. adverb
3. noun or adjective
4. adverb
5. noun
6. noun
7. adjective
8. adverb
9. adjective
10. noun

Obj. 4 for Auto Repair Packet

Write the meaning of the following prefixes.
100% correct = mastery.

kilo - _____ deci - _____

hecto - _____ cent - _____

deca - _____ milli - _____

Obj. 4 for Environmental Studies Packet

Obj. 5 for Data Processing, Ag., and Health Packets

Write the meaning of the following prefixes.
80% correct = mastery.

-scope

-ology

-able

-ize, ate

-phobia

ANSWER KEY

Obj. 4 Auto Body

thousand	one tenth
hundred	hundred, hundredth
ten	one thousandth

Obj. 4 & 5

instrument for visual examination

study of

capable of

to subject to, to make

fear of

PRE/POST TEST
LEARNING WORD PARTS

Obj. 1 for Auto Body Packet

Obj. 4 for Business Packet

Obj. 5 for Environmental Studies Packet

Obj. 6 for Data Processing, Ag, and Health Packets

Write the root word in each of the following words.
80% correct = mastery

1. factually
2. automatically
3. carelessness
4. suitable
5. immaturity
6. endurable
7. concurrent
8. acidity
9. inequality
10. evaporation

ANSWER KEY

1. fact
2. auto
3. care
4. suit
5. mature
6. endure
7. current
8. acid
9. equal
10. vapor

Obj. 5 for Business Packet

Obj. 6 for Auto Repair and Environmental Packets

Obj. 7 for Data Processing, Ag., and Health Packets

A. Draw a line between the words that make up the compound word.

B. Then match the compound word to its definition.
80% correct = mastery.

1. ____ bookmark
2. ____ wholesale
3. ____ hardtop
4. ____ windshield
5. ____ pipeline
6. ____ groundwater
7. ____ input
8. ____ feedback
9. ____ feedlot
10. ____ eyestrain

a. glass in front of a vehicle to protect passengers from the wind.

b. the feeding back of part of the output of a machine to the computer.

c. selling of goods in large quantities.

d. pipes joined to provide a duct through which fluids flow.

e. fatigue of eyeball muscles.

f. area where cattle are kept and fattened for market.

g. an auto with a fixed hard top.

h. information to be put into a computer.

i. something put between pages to make it easy to find the place.

j. water below the watertable.

ANSWER KEY

1.	i	6.	j
2.	c	7.	h
3.	g	8.	b
4.	a	9.	f
5.	d	10.	e

1.	book/mark	6.	ground/water
2.	whole/sale	7.	in/put
3.	hard/top	8.	feed/back
4.	wind/shield	9.	feed/lot
5.	pipe/line	10.	eye/strain

Obj. 5

1. instrument for observing
   study of something using instrument for observing.
2. a. cut
      surgical removal of
   b. ectomy
   c. tomy
3. study of
4. capable of operating
   not capable of operating
   able to suit
   able to endure
      1. subject to anesthetic
      2. to make local
      3. to make sensitive
5. fear of
6. a. meningitis
   b. hepatitis
   c. myelitis
   d. tuberculosis
      tuberculoma
   e. trichinosis

Self Post-Test

study of with an instrument for observing
surgical removal of
to subject to
to be capable of
disease or condition
fear of
cut
inflamation
tumor
study of
instrument for observation

Obj. 6

1. a. diagnosis
   b. vapor
   c. immune
   d. practice
   e. planet
   f. contest

2. b. unheated
      reheat
      heater
   c. manliness
      manly
      mannish
   d. disable
      ably
      unable
   e. careful
      careless
      caring
   f. ageless
      aged
      aging
   g. deice
      icy
      icicle
   h. sadder
      sadly
      sadness
   i. unkind
      kindest
      kindly
   j. talkative
      talker
      talking
   k. unheard
      hearing
      hearer

3. b. iz, a, tion
      immune
      not susceptible to
      the process of becoming immune
      changes from an adjective to a noun
      yes
   c. medic
      flex
      trauma
      care
      visual
      operate

Self Post-Test

1. oral
2. derm
3. cell
4. suit
5. digest
6. equal
7. mature
8. current
9. care
10. mucous
11. acid
12. biology
13. sloth
14. endure
15. phobia
16. fact
17. vein

Obj. 7

Self Post-Test

1. G ear/drum
2. I head/ache
3. A draw/shot
4. D thumb/nail
5. K self/made
6. E cross/match
7. F eye/strain
8. L eye/lid
9. B silo/fillers
10. H knee/cap

Obj. 1

1. 3, three
   2, two
   uni, uni, one
2. 4, 4, 4
3. half
4. 1/100, hundred or hundredth
5. equi, i
6. much, many
   single

8. g
   a
   l
   b
   k
   f
   h
   c
   j
   d
   i
   e

Self Post-Test

one
single
two
three
four
half
hundred, hundredth
thousand, thousandth
thousand
many, much
equal

Obj. 2

A.		B.					Self Post-Test
1. C	1. B	a.	hyper	c.	between		E
2. B	2. E		hypo		within		D
3. A	3. A	b.	abduct	d.	in, into		F
4. D	4. G		adduct		not		G
5. E	5. C		abducted		immature		A
6. H	6. F		adducted		unable		B
7. I	7. D		advise		into		A or H
8. F	8. H		adjective		into		A or H
	9. J		adhere				
	10. I		adjust				
			abdomen				
			abductor				
			abhor				

Obj. 3

anthropocentric - human centered
anthrogenesis - human beginning
anthropology - study of humans
autobiography - story of self
autoinoculation - self inoculation
automatic - self working
hydroelectric - water made electricity
hydrophobia - fear of water
hydrofoil - water boat
microbiology - biology of small things
microscope - instrument for looking at small things
microcapsule - small capsule
neurology - study of nerves
neurosurgery - surgery on nerves
neuromuscular - nerves and muscles
pneumonia - illness of lungs (air)
protoplasm - first plasm
prototype - first type
isocellular - equal cell
isomorphic - same structure
isometric - equal measure

Self Post-Test

1. E
2. D
3. A
4. B
5. C
6. J
7. I
8. F
9. G
10. H

Obj. 4

1-3 check with instructor

Self Post-Test

1. N	8. N	15. ADJ
2. ADV	9. N or ADJ	16. N
3. ADJ	10. ADV	17. N or ADJ
4. N	11. ADV	18. N
5. N	12. ADJ	19. N or ADJ
6. ADJ	13. ADV	20. ADV
7. N	14. N	

LEARNING WORD PARTS: HEALTH OCCUPATIONS

		Page
OBJECTIVE 1:	Identify and give the meanings of ten given prefixes	2
	Self Post-Test	6
OBJECTIVE 2:	Identify the meanings of 20 given prefixes	7
	Self Post-Test	12
OBJECTIVE 3:	Identify the meanings of 8 of 10 given prefixes	13
	Self Post-Test	15
OBJECTIVE 4:	(1) Identify the suffixes in 20 given words and (2) determine from the suffix whether the word is a noun, adjective, or adverb	16
	Self Post-Test	21
OBJECTIVE 5:	Give the meanings of 8 of 10 given suffixes	23
	Self Post-Test	26
OBJECTIVE 6:	Identify the root words in 15 given words	27
	Self Post-Test	32
OBJECTIVE 7:	(1) Recognize known word parts in compound words and (2) use the known word parts to determine the meaning of the compound words	33
	Self Post-Test	34

LEARNING WORD PARTS

A word like extracellular may at first glance seem frustrating and even impossible. But, long words such as extracellular can sometimes be broken down into word parts (extra--cell--ular) which make them easier to understand and read. Often these long words are nothing more than short words with prefixes or suffixes added on. If you are familiar with the word cell (the basic unit of living substance) you will already have an idea of what the longer word, extracellular, means. Once you learn what the prefix "extra" and the ending "ular" mean, you will have a clearer idea of the meaning of the whole word. Each of the word parts provides a clue to the meaning of extracellular.

In this unit you will learn to identify different parts of words, then the meanings of some of the most commonly used word parts in the Health Occupations area. When you know how to do this you will be able to unlock the meanings of many unfamiliar words as you read.

OBJECTIVE 1

You will be able to identify and give the meanings of at least 10 of the following prefixes:

PREFIX	MEANING
bi-	double, twice, two
centi-	hundred, a hundredth
demi, hemi, semi-	half
equi-	equal
kilo-	thousand
milli-	thousand, a thousandth
mono-	single
multi-	many
poly-	much, many
quadri-	four
tri-	three
uni-	one

STRATEGY

Read the following definition and example carefully. A prefix is a syllable (a part of a word) added to the beginning of a word which changes or alters the meaning of the word.

EXAMPLE:	Prefix		Word or Root		
	poly	+	graph	=	polygraph
	hemi	+	sphere	=	hemisphere

Now that you have an idea of how prefixes work, do the following practices. You may look back at the first paragraphs for meanings, but try to fill in the blanks you know first.

1. Fill in the missing words.

Tricycle

A vehicle with _____ wheels.

Tri- means _____.

Bicycle

A vehicle with _____ wheels.

Bi- means _____.

_____ cycle

A vehicle with one wheel.

_____ means _____.

2. A triangle has three sides. How many sides does a quadrangle have? _____

How many feet do the quadrupeds--dogs, cattle, elephants, etc.--have? _____

The prefixes quad-, quadri-, and quadru- mean:

_____

3.

cup of coffee

demitasse of coffee

sphere

hemisphere

circle

semi-circle

Demi-, hemi- and semi- mean _____

4. The base word meter is a length of measure somewhat longer than a yard.

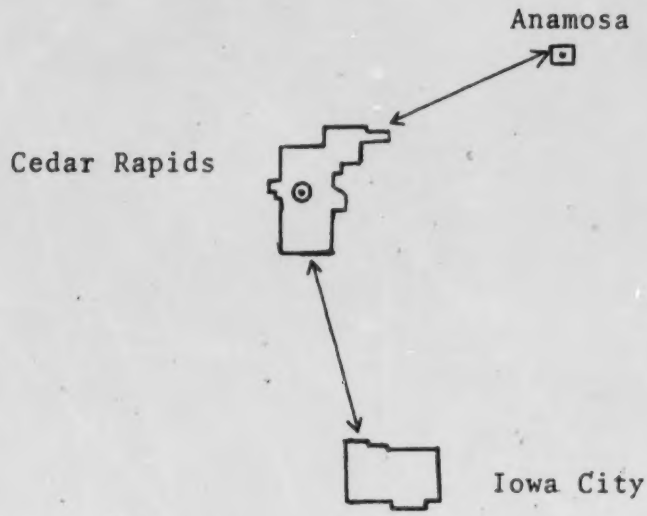
Centimeter is a word made up of a prefix (centi-) and the base word meter. Look back at the list of prefixes and their definitions (under Objective 1) to find out what centi- means.

A centimeter is a _____ of a meter.

centi- means _____

5. Anamosa and Iowa City are of equal distance from Cedar Rapids. In other words, Anamosa and Iowa City are _____ distant from Cedar Rapids.

The al in equal is dropped and replaced by _____ in the prefix equi-.



6. Polygamy is illegal in the United States; only monogamy is legal. That is, one person's being married to two or more (many) people at one time is illegal; one person may be legally married to only one person at a time.

A polygraph, often called a "lie detector" measures the changes in several (many) of the body's processes at the same time.

A polyglot speaks several (many) languages.

Comedians who work alone (one person speaking) give monologues.

A person who speaks in a single (one) tone is said to use a monotone.

poly- means _____

mono- means _____

7. The prefix multi- has a similar meaning to poly-.

multi-colored = something that has many colors

multimillionaire = someone who has millions of dollars

8. Match the meanings in Column 2 to the prefixes in Column 1.

COLUMN 1	COLUMN 2
_____ mono-	a. double, twice, two
_____ bi-	b. hundred, hundredth
_____ uni-	c. half
_____ centi-	d. equal
_____ tri-	e. thousand
_____ milli-	f. thousand, thousandth
_____ multi-	g. single, one
_____ demi, hemi-, semi-	h. many
_____ quad-	i. much, many
_____ equi-	j. four
_____ poly-	k. three
_____ kilo-	l. one

SELF POST-TEST

Cover your work for all previous strategies; write the meaning of each of the following prefixes:

uni-

mono-

bi-

tri-

quadri-

demi-, hemi-, semi-

centi-

milli-

kilo-

poly-

equi-

Did you get 9 or more of the above meanings correct? Good! If you missed more than 2, see your instructor for other activities to learn these prefixes.

OBJECTIVE 2: Part A

You will be able to identify the meanings for at least 12 of the following prefixes:

PREFIX	MEANING
anti-, contra-	against, opposite, opposed to
dia-	through, apart, across, completely
dis-	reversal, apart from, separation, deprive of
ecto-	on outer side, situated on
endo-	within
epi-	upon, on
infra-	below
para-	beside, beyond, near to
per-	through, excessive
peri-	around
post-	after, behind
pre-	before, in front of
retro-	backward, located behind
sub-	under
trans-	across, through, beyond, from one place to another

STRATEGY

These prefixes are frequently used in terminology you will come across in studying Health Occupations. Their most commonly used definitions are given.

CAUTION: These letters at the beginning of a word are not always prefixes. They are sometimes a part of the base word, as in the word subtle. You should always examine a word carefully to determine first, if it has a prefix, and secondly, what that prefix may mean. (Note that some of the prefixes have more than one definition listed.) But most importantly, you should look at the sentence the word is used in to see if the definition you have determined by word analysis fits.

* *

1. The following words contain prefixes you should become familiar with. In each of the sentences below, select one of these words to replace the underlined word or words. (Use the prefixes for clues.) Write the letter for that word in the blank that follows the sentence.

A. retroactive	D. transport	G. advocate
B. submerge	E. anti-women	H. contradict
C. permeate	F. transcend	I. subterranean

1. The cold weather could not pass through her warm clothing. 1. ____
2. Is putting the instruments under boiling water enough to sterilize them? 2. ____
3. The increase in pay was made effective before the present date. 3. ____
4. They will carry the respirator from the doctor's office to the hospital next week. 4. ____
5. Males who are against women tend to 5. ____
6. oppose their own argument when they date girls. 6. ____
7. A mole is an under the earth animal. 7. ____
8. Meditation is supposed to help a person go beyond his/her natural state of being. 8. ____

2. Match the word in Column A with its meaning in Column B by placing the letter of the correct meaning in the blank that precedes it. Use the prefixes as clues in determining word meanings. Do the ones you recognize easily first.

COLUMN A		COLUMN B
1. _____	infraorbital	A. after an operation
2. _____	paracardiac	B. below the eye
3. _____	postoperative	C. cut apart
4. _____	precral	D. wall across
5. _____	dissect	E. beside the heart
6. _____	ectoderm	F. outer skin
7. _____	diaphragm	G. in front of the mouth
8. _____	peribronchial	H. around the bronchus
9. _____	endocardium	I. on the skin
10. _____	epidermis	J. within the heart

If you missed more than two of these, check with your instructor before going on.

PART B

You will be able to identify the meanings for at least 8 of the following prefixes:

PREFIX	MEANING
ad-	to, toward, near to
ab-	away from
hyper-	over, above, excessive
hypo-	under, below, deficient
im-, in-	in, into, not
inter-	between
intra-	within

1. Special attention should be given to the following sets of prefixes which are very close in spelling, but opposite in meaning.

   A. hypo-, hyper-

   Fill in the blanks.

   The _____ -active child is highly energetic and easily distracted.

   On the other hand, the _____-active child is withdrawn and appears very shy and withdrawn.

   B. ab-, ad-

   Clue: Think of ad- as "to add to".

   Fill in the correct prefix:

   _____-duct means to lead away.

   _____-duct means to draw toward.

   She _____-ducted her arm by raising it away from her body.

   She _____-ducted it by returning it to or near her side.

   These two prefixes are also frequently a part of the base word. Place a check only in front of the words using ad- or ab- as a prefix. You may use a dictionary to help you determine which are prefixes.

   _____ advise
   _____ adjective
   _____ adhere
   _____ adjust
   _____ adept

   _____ abdomen
   _____ ability
   _____ abductor
   _____ above
   _____ abhor (to keep away from in scorn or fear)

   C. inter-, intra-

   An interview is a meeting between two or more people; to intervene is to come between.
   Intramural sports involve teams within a school.

intercellular = between two or more cells

intracellular = within a cell

inter- = _____

intra- = _____

D. im-, (in-)

This prefix has two meanings; you will need to examine the word and the sentence carefully to determine which meaning is correct. First write the two meanings, then fill in the blanks in the sentences below.

im-, in- = (1) _____

(2) _____

An immature student is _____ mature; his inability to cope with problems makes him _____ able to lead others.

An injection forces medicine _____ a person's body.

The medicine is then infiltrated or filtered _____ the blood cells.

SELF POST TEST

*From what you have learned in the above strategy, you should now be able to match the following prefixes and their meanings.

_____	inter-	A. over, above, excessive
_____	intra-	B. under, below, deficient
_____	ad-	C. in, into
_____	ab-	D. within
_____	hyper-	E. between
_____	hypo-	F. to, toward, near to
_____	im-, in-	G. away from
_____	im-, in-	H. not

** If you missed any of these, go back over activities A-D before going on.

OBJECTIVE 3

You will be able to identify at least 8 of the following prefixes:

PREFIX	MEANING
anthropo-	human being
auto-	self
heter- (hetere-)	different
homo-	one, similar, alike
hydro-	water
micro-	small
neuro-	nerve
pneumo-	air
proto-	first formed
iso-	same, equal

STRATEGY

These prefixes have only one, invariant (unchanging) meaning. They along with three of the prefixes given under Objective 1 (mono-, poly-, uni-) will unlock the meanings of many scientific words which you will come across in reading microbiology, anatomy, and physiology texts, and other scientific material in a Health Occupations program.

Combine these prefixes with the given word part , then define each word. You may use a dictionary to determine meanings.

PREFIX		WORD PART		WORD	MEANING
anthropo-	+	-centric	=	_____	_____
	+	-genesis	=	_____	_____
	+	-ology	=	_____	_____
auto-	+	-biography	=	_____	_____
	+	-inoculation	=	_____	_____
	+	-matic	=	_____	_____
hydro-	+	-electric	=	_____	_____
	+	-phobia	=	_____	_____
	+	-foil	=	_____	_____
micro-	+	-biology	=	_____	_____
	+	-scope	=	_____	_____
	+	-capsule	=	_____	_____
neuro-	+	-logy	=	_____	_____
	+	-surgery	=	_____	_____
	+	-muscular	=	_____	_____
pneumo-	+	-nia	=	_____	_____
proto-	+	-plasm	=	_____	_____
	+	-type	=	_____	_____
iso-	+	-cellular	=	_____	_____
	+	-morphic	=	_____	_____
	+	-metric	=	_____	_____

SELF POST TEST

Match the following prefixes with their meanings without looking back at the activities.

____1.	hydro-	A.	human being
____2.	homo-	B.	self
____3.	anthropo-	C.	different
____4.	auto-	D.	one, similar, alike
____5.	heter-	E.	water
____6.	iso-	F.	small
____7.	proto-	G.	nerve
____8.	micro-	H.	air
____9.	neuro-	I.	first formed
____10.	pneumo-	J.	same, equal

** With a score of 8 or more correct on this activity, go on to Objective 4. If you missed more than 2, see your instructor.

OBJECTIVE 4

(1) You will be able to identify the suffixes in 20 given words.

(2) You will be able to determine from the suffix whether the word is a noun, adjective, or adverb.

STRATEGY

Suffixes are final syllables added to the end of a word which affect that word's meaning and the way it is used in a sentence. A suffix often tells you what a word does--whether it names or describes.

Though you may not know what a word means, knowing what it does in a sentence will give you some clues about that word.

Here are some clues to help you identify what a word does in a sentence:

EXAMPLE 1: The suffix -al usually indicates an ADJECTIVE (a word which describes or tells something about a noun).

Facial, practical, and exceptional are adjectives ending in -al.

EXAMPLE 2: The suffix -ly is usually the sign for an ADVERB. An adverb is a word that describes how, where, or why something happens.

Clearly, quickly, slowly, happily, and immediately are all adverbs ending in -ly.

EXAMPLE 3: Such suffixes as -ion (-tion, -sion), -ence, (-ance), -y and -ity usually indicate that the word is a NOUN (a word that names a person, place, thing, or idea).

Caution, vision, independence, piracy, and capacity are examples of nouns ending with these suffixes.

1. This practice contains words with suffixes that mark them as ADJECTIVES. Four examples are given for each suffix. Give four more examples for each. You may skim one of your textbooks to find examples.

-ial, -al endings
1. special
2. chemical
3. environmental
4. universal
5. _____
6. _____
7. _____
8. _____

-ic, -ac endings
1. graphic
2. allergic
3. cardiac
4. epidemic
5. _____
6. _____
7. _____
8. _____

-ful ending
1. cheerful
2. tactful
3. helpful
4. dutiful
5. _____
6. _____
7. _____
8. _____

-ish ending
1. foolish
2. reddish
3. selfish
4. freakish
5. _____
6. _____
7. _____
8. _____

-ant, -ent endings
1. recipient
2. dominant
3. different
4. convenient
5. _____
6. _____
7. _____
8. _____

-ible, -able endings
1. terrible
2. digestible
3. capable
4. flexible
5. _____
6. _____
7. _____
8. _____

-ive ending
1. captive
2. passive
3. preventive
4. decisive
5. _____
6. _____
7. _____
8. _____

-ous, -ious endings
1. cautious
2. famous
3. serrous
4. contagious
5. _____
6. _____
7. _____
8. _____

2. ADVERB SUFFIXES

This practice deals with words with suffixes that mark them as ADVERBS. Four examples are given for each suffix. Give four more examples for each.

-ly ending
1. quickly
2. mildly
3. slowly
4. easily
5. _____
6. _____
7. _____
8. _____

-fully ending
1. carefully
2. dutifully
3. cheerfully
4. forcefully
5. _____
6. _____
7. _____
8. _____

-ably, -ibly endings
1. capably
2. possibly
3. forcibly
4. noticeably
5. _____
6. _____
7. _____
8. _____

3. NOUN SUFFIXES

This practice contains words with suffixes that mark them as NOUNS. Four examples are given. Fill in each blank with another example. You may skim one of your textbooks to find examples.

-ist, -or, -er endings
1. dentist
2. anesthetist
3. dissector
4. examiner
5. _____
6. _____
7. _____
8. _____

-y, -ity ending
1. veracity
2. acidity
3. inequality
4. disparity
5. _____
6. _____
7. _____
8. _____

-ance, -ence endings
1. cadence
2. evidence
3. tolerance
4. independence
5. _____
6. _____
7. _____
8. _____

-ion, -tion endings
1. transfusion
2. transition
3. operation
4. conversation
5. _____
6. _____
7. _____
8. _____

SELF POST-TEST

DIRECTIONS: Without looking back at any of the practices, underline the suffixes of each of the following words. Place an X in the column that indicates the type of word it is.

	Noun	Adj.	Adv.
1. independence			
2. carefully			
3. slavish			
4. publicity			
5. petition			
6. helpful			
7. misery			
8. inhalation			
9. official			
10. miserly			
11. happily			
12. concurrent			
13. elegantly			
14. elegance			
15. mucinous			

	Noun	Adj.	Adv.
16. acidity			
17. essential			
18. profession			
19. professional			
20. professionally			

** If you made any errors in underlining the suffixes, go back and look at the examples for that suffix. If you missed more than two on the second part of the practice, see your instructor. Otherwise, go on to the next objective.

OBJECTIVE 5

You will give the meanings of at least 8 of the following suffixes:

Suffix	Meaning
-tomy	cut, incise
-scope	instrument for visual examination
-ology	study of
-phobia	fear
-scopy	to examine visually
-ectomy	surgical removal of
-able	capable of
-ize, -ate	to subject to, to make
-itis	disease or inflammation
-osis	disease or condition, usually morbid
-oma	a new growth or tumor

STRATEGY

In the following words, is -able a prefix or a suffix?

operable inoperable suitable

It is a suffix because it comes at the end of the word.

Complete the activities below to help you learn the meanings of the following suffixes which are frequently used in Medical Assistant vocabulary. Like the prefixes, they will provide clues to meanings of difficult words.

1. Microscope
   Telescope
   Stethoscope

   All instruments for observing something or some process

   Microscopy
   Telescopy
   Stethoscopy

   The study of the use of or the using of the instrument for observation

Now fill in the blanks:

-scope means _____

-scopy means _____

2. Lobotomy: surgery (cutting) on or into a brain lobe

   Gastrotomy: surgery on the stomach wall

   Appendectomy: the removal of the appendix

   Tonsilectomy: the removal of the tonsils

Fill in the blanks:

(a) -tomy means _____

-ectomy means _____

(b) "Pulmonary" refers to the lung.
Removal of a lung is known as a pulmon_____.

(c) Neuro refers to a nerve.
Dissection (or cutting) into a nerve is known as a neuro_____.

3. Parasitology: the study of parasites

   Bacteriology: the study of bacteria

   Histology: the study of tissues

-ology means _____

4. Explain the meanings of the following words:

   a. The suffix -able means able to or capable of.

      (1) operable: _____

      (2) inoperable: _____

      (3) suitable: _____

      (4) endurable: _____

b. The suffix -ize means to subject to or to make.

(1) anesthetize: _____

(2) localize: _____

(3) sensitize: _____

5. Hydrophobia: fear of water

Photophobia: fear of light

Claustrophobia: fear of close places

-phobia means _____

Have you ever had a case of examophobia?

6. The suffixes most commonly used to indicate disease are:

-itis: inflammation

-oma : tumor

-osis: a condition, usually morbid

Complete the following words by adding the correct suffix:

a. The meninges are membranes which envelop the brain and spinal cord.

Inflammation of these membranes is known as mening_____.

b. Hepato- refers to the liver.

Inflammation of the liver is known as hepat_____.

c. Myel- refers to the spinal cord and to bone marrow.

Inflammation of the spinal cord is known as myel_____.

d. A disease caused by a bacterium which has small swellings known as tubercles is called tubercul_____.

A tumor which is formed by these bacteria is known as a tubercul_____.

e. Eating raw pork can give you a dreadful disease known as trichin_____

SELF POST-TEST

Without looking back at your work on the previous strategies, write the meaning of each of these suffixes:

-scopy _____ -tomy _____

-ectomy _____ -itis _____

-ize _____ -oma _____

-able _____ -ology _____

-osis _____ -scope _____

-phobia _____

Did you get 9 or more correct? Great!! Now go on to the next objective.

If you missed more than 2, see your instructor.

OBJECTIVE 6

You will be able to identify the root words in 15 given words.

Definition:

Root Word = (1) the part of a word that carries the main load of the meaning.

(2) The base of a word to which other parts--prefixes and suffixes--are added.

STRATEGY:

Many times words seem "impossible" or unreadable simply because they are long. For example, look at the word just used:

unreadable

Can you see a word within that word? Once you identify the root word (read), the puzzle of this "new" word is practically solved.

Complete the following activities to help you learn to identify root words. Then, look for familiar root words in long words you come across in your reading.

1. Strip the following words down to their root words by removing their prefixes and suffixes.

Example: unreadable

(Prefix)	Root Word	(Suffix)
un /	read	/ able

(HINT:There might not be both a prefix and suffix in a word. Also, a word might have more than one suffix.)

ROOT

a. prediagnosis _____

b. vaporization _____

c. immunization _____

d. impracticality _____

e. interplanetary _____

f. incontestable _____

2. Look at the underlined root word in each practise below. Three of the four words under it are related in meaning because they are formed from this root word. Check these words. The first group is done for you.

a. sing a tune

__X__ singer

__X__ singable

__X__ singing

____ using

b. steam heat

____ unheated

____ cheat

____ reheat

____ heater

c. woman or man

____ manliness

____ manly

____ almanac

____ mannish

d. able to operate

____ disable

____ table

____ ably

____ unable

e. health care

____ careful

____ careless

____ scare

____ caring

f. years of age

____ ageless

____ aged

____ manage

____ aging

g. snow and <u>ice</u>

____ deice
____ icy
____ icicle
____ notice

h. <u>sad</u> story

____ sadden
____ sadly
____ sadness
____ saddle

i. <u>kind</u> person

____ unkind
____ kindest
____ kindly
____ kindle

j. <u>talk</u> quietly

____ talkative
____ stalk
____ talker
____ talking

k. <u>hear</u> a noise

____ unheard
____ heart
____ hearing
____ hearers

As you can see, when looking for small words within longer words, you need to:

1. look for the <u>root word</u>, not just a certain group of letters, and
2. remember that sometimes the spelling of the root word is changed before a suffix is added. (Example: In Practice C <u>man</u> is the root word, but with a suffix the <u>n</u> is doubled--mannish.)

3. A word may have more than one suffix (one added on to another) which makes the word look long and difficult. To "attack" this kind of word, follow these steps:

   (1) Look for and break off the suffixes

   (2) Determine the meaning of the root word

   (3) Determine the meaning of the suffixes and how they change the meaning of the root word.

   (4) Check the sentence to be sure your definition "fits".

   Follow these 4 steps in deciding the meaning of the following words.

   Example: a. hopelessly: He was hopelessly in love with his best friend's girlfriend.

   (1) Suffix (es): -less, -ly

   (2) Root Word: hope

   Meaning: expectation of something good

   (3) How is the root word changed by the suffixes?

   -less means "without" and -ly changes the word to an adverb; thus, hopelessly describes the way he loved her--without hope.

   (4) Test this definition out in the sentence to see if it makes sanse.

b. immunization: She went to the doctor's office to get a measles immunization.

(1) Suffix (es): _____

(2) Root Word: _____

Meaning: _____

(3) How is the root word changed by the suffixes?

_____

_____

_____

(4) Does this definition make sense in the sentence above?

Yes _____ No _____

c. Identify the root word in the following words:

	Suffixes	Root Word
medically	_____	_____
flexibly	_____	_____
traumatically	_____	_____
carelessness	_____	_____
visualization	_____	_____
operatively	_____	_____

SELF-POST TEST

Underline the root word in each of the following words.

1. preoral
2. epidermis
3. intercellular
4. suitable
5. digestable
6. inequality
7. immature
8. concurrent
9. carelessness
10. mucinous
11. acidity
12. microbiology
13. slothfulness
14. endurable
15. hydrophobia
16. factually
17. intraventricular

When you have completed this test see your instructor. If you got 15 or more correct, you are ready to go on to the next unit.

You will learn the meanings of several root words in your program. Now that you have learned to recognize word parts and the meanings of some of them, you can determine the meaning of many unfamiliar words.

OBJECTIVE

(1) You will be able to recognize known word parts in compound words and (2) you will be able to use the known word parts to determine the meaning of the compound words.

STRATEGY

Sometimes words are made up of two or more parts that are words which make sense by themselves. We call these compound words.

Read pages 2 and 3 in IRS booklet B-2 (Green) for an explanation of compound words. Do the exercises on those two pages in your head. Please do not write in the booklet.

SELF POST-TEST

A. Copy the compound words in the first column onto a piece of paper. Then, draw a line between the two words that make up the compound.

B. Use the meanings of the two short words in each compound to help you find the correct definition for the compound in Column 2. Write the letter of the definition on your paper next to the compound. An example has been done.

COLUMN 1		COLUMN 2
C	over/load	a. a sheet placed under the buttocks of a patient which can be removed readily when soiled
____ 1.	eardrum	b. a lung condition caused by fresh silage
____ 2.	headache	c. to put too large a load in or on something
____ 3.	draw-sheet	d. the nail of a thumb
____ 4.	thumbnail	e. to mix a sample of a donor's blood with that of a recipient
____ 5.	self-made	f. fatigue of the eyeball muscles
____ 6.	crossmatch	g. the membrane located at the end of the ear canal
____ 7.	eyestrain	h. a flat triangular bone located at the front of the knee joint
____ 8.	eyelid	i. a pain in the head
____ 9.	silo-fillers	j. love of self
____ 10.	kneecap	k. successful through one's own effort
		l. fold of skin and muscle that can be closed over an eye

Check your answers. If you missed more than one, see your instructor. Otherwise, you are ready to take the teacher post-tests.

PERSONAL ACHIEVEMENT

READING

Health Occupations

Finding Exact Meanings

Prepared by Janet R. Swinton

Kirkwood Community College
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Fund for the Improvement of Postsecondary Education

PRE/POST TEST
FINDING EXACT MEANINGS

Obj. 1

A. Number the following words 1-10 to show their alphabetical order. 80% correct = mastery

____	some	____	leave
____	hope	____	them
____	that	____	alone
____	I	____	to
____	will	____	fly

B. Check where you would look in the dictionary to quickly locate the following words. 80% correct = mastery

	front	middle	back
1. variable	____	____	____
2. telegram	____	____	____
3. envelope	____	____	____
4. numeric	____	____	____
5. grief	____	____	____

Obj. 2

Put an X before each word you would expect to find on a dictionary page that has the two given guide words. 80% correct = mastery

sometimes		symbol	
____	simple	____	stop
____	slip	____	spoil
____	spat	____	seal
____	soil	____	supper
____	soak	____	stamp

Obj. 3 [OMIT FOR BUSINESS]

In each of the five examples, tell which part of the dictionary entry is underlined. 100% correct = mastery

1. lan·guette (lăng'gwĕt) n. [F] Music a thin plate fastened to the mouth of certain organ pipes.

   a. correct spelling and number of syllables (the word itself)
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

2. pow (pō, pou) n. [Scot. and N. Eng.] the poll; the head

   a. correct spelling and number of syllables (the word itself)
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

3. meg·a·pod (mĕg' ə pŏd') adj. having large feet

   a. correct spelling and number of syllables (the word itself)
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

4. fink (fĭngk) n. [U.S. Slang] 1. a strikebreaker 2. a labor spy

   a. correct spelling and number of syllables (the word itself)
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

5. lit·er·a·cy (lĭt'ər ə sĭ) n. state of being literate, possession of education

   a. correct spelling and number of syllables (the word itself)
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

Obj. 4 [THIS IS OBJ. 3 FOR BUSINESS]

Use the pronunciation key to decide how each word is pronounced. Then check the one of the 3 given words that has the same vowel sound as the first word. 80% = mastery

1.	bush (bo͝osh)	____	bus	____ cook	____	loose
2.	dove (dŏv)	____	love	____ soil	____	choke
3.	feign (fān)	____	take	____ fight	____	feel
4.	crepe (krāp)	____	crawl	____ sail	____	peep
5.	id (i͝d)	____	wit	____ wipe	____	ego

PRONUNCIATION KEY

ă pat/ ā pay/ âr care/ ä father/ ĕ pet/ ē be/ i͝ pit/ ī pie/ îr fierce/ ŏ pot/ ō toe/ ô paw, for/ oi noise/ ou out/ o͝o took/ o͞o moon/ th thin/ th this/ ŭ cut/ ûr turn/ yo͞o use/ ə about/ zh pleasure

Obj. 5 [OBJ. 4 FOR BUSINESS]

In each sentence is an underlined word that might have several meanings. Choose the meaning that makes the most sense from the several dictionary meanings given. 80% = mastery

1. I am afraid I will <u>forget</u> my keys.

   a. to cease to remember
   b. to omit or neglect unintentionally
   c. to omit to take, leave behind

2. You will soon come to a <u>fork</u> in the road.

   a. the point at which a road or river divides
   b. an instrument having 2 or more prongs for lifting
   c. a tuning fork
   d. dividing into branches

3. The <u>former</u> was early, while the latter was late.

   a. preceding in time
   b. past or ancient
   c. preceding in order, being the first of two
   d. having held a particular office in the past

4. The robbers took a cool million in <u>ice</u>.

   a. solid water
   b. slang for diamonds
   c. to frost
   d. formality

5. We opened up the house to get some circulation.

   a. not shut, as a door
   b. not closed or shut
   c. unfilled
   d. undecided

Obj. 6 [OBJ. 8 FOR BUSINESS]

Name 3 sources besides a dictionary that help you find the exact meanings of words.

1. _____

2. _____

3. _____

FOR BUSINESS ONLY
OBJ. 5-7

Match the following words with their correct definitions.
80% correct = mastery

____ affect	1. qualified
____ effect	2. occurring twice a year
____ eligible	3. went by
____ illegible	4. to influence
____ biannual	5. smallest degree
____ biennial	6. rented
____ passed	7. result, to bring about
____ past	8. occurring every two years
____ leased	9. not readable
____ least	10. earlier in time, gone by

ANSWER KEY
PRE/POST TEST
FINDING EXACT MEANINGS

Obj. 1

6	some	5	leave
3	hope	8	them
7	that	1	alone
4	I	9	to
10	will	2	fly

1. back
2. back
3. front
4. middle
5. front

Obj. 2

spat
stop
spoil
supper
stamp

Obj. 3

1. B
2. C
3. E
4. D
5. A

Obj. 4

1. cook
2. choke
3. take
4. sail
5. wit

Obj. 5

1. C
2. A
3. C
4. B
5. B

Obj. 6

1. glossary
2. index
3. footnotes/context

BUSINESS ONLY 5-7

4	affect	8	biennial
7	effect	3	passed
1	eligible	10	past
9	illegible	6	leased
2	biannual	5	least

ANSWER KEY
FINDING EXACT MEANING
HEALTH OCCUPATIONS

Obj. 1

1. arthodesis
2. cystocele
3. gastrocele
4. hydrocele
5. leukopenia
6. myelocele

1. hydrocele - hyperglycemia
2. encephalitis - enteritis
3. ileostomy - ileum
4. adenoma - anenectomy

a. F
b. F
c. B
d. F
e. M
f. B
g. M
h. B
i. M
j. M
k. F
l. B
m. F
n. B
o. M

Obj. 2

abdomen - arthritis
abdominal
anemia
alcoholism
adrenal
amenorrhea
appendicitis
cardiac - cornea
ciliary
cavus
colonic
cervical
congenital
cholera
leukemia - menstrual
lymphatic
menopause
lung
lymph
malignancies
spermatozoa - spruce
spleen
sporadic
spine
spermatozoon
spring

Obj. 3

1. (sə voi')
2. adj. adjective
3. [ME skeyn < MFr.]
4. like a star, as in shape, (stel'ər)
5. 2, n., a principle, doctrine, or belief held as a truth.

1. C
2. A
3. E
4. D
5. B
6. A
7. E
8. B
9. C
10. D

Obj. 4

1. gray
2. grape
3. coil
4. rude
5. hot
6. feet
7. wipe
8. coat
9. fast
10. cup
11. time
12. core
13. lad
14. red

Obj. 6

a. neurology
b. influenza
c. snow
d. microscope
e. surgeon
f. earth
g. arthritis
h. hydrophobia

1. footnotes/context
2. glossary
3. index
4. dictionary

GLOSSARY

FINDING OUT EXACT MEANINGS: HEALTH OCCUPATIONS

		Page
OBJECTIVE 1:	(1) Quickly locate the appropriate section of the dictionary in which a word is found and (2) arrange given words in alphabetical order.	2
	Self Post-Test	3
OBJECTIVE 2:	Locate words in a dictionary by using guide words and alphabetical order.	4
	Self Post-Test	4
OBJECTIVE 3:	Skim a dictionary entry and identify different parts of the entry in eight out of ten examples.	6
	Self Post-Test	8
OBJECTIVE 4:	Use a pronunciation key to decide the correct way to pronounce a word.	12
	Self Post-Test	13
OBJECTIVE 5:	Choose the correct meaning from several meanings stated in a dictionary entry.	14
	Self Post-Test	14
OBJECTIVE 6:	(1) Name three sources besides a dictionary to find exact meanings of words and (2) identify the location of these sources in own text materials.	15

FINDING OUT EXACT MEANINGS (Using Glossaries and Dictionaries)

As you read, you will come across words for which your skills in examining word parts and/or using the context are not enough when you need to know the exact meaning of a word. The purpose of this unit is to help you become aware of different sources for looking up new words and to help you learn how to use those sources.

Contrary to ideas you may have formed in grade school, a dictionary is not just a tool for boring drills and "copy-work". Instead, the dictionary is the most reliable source you can turn to if you want to learn or confirm your hunches about the meaning of a word. In addition to pronunciations and definitions, many dictionaries give information about the history of a word, synonyms (other words that mean the same thing), and antonyms (words opposite in meaning). Sample phrases and sentences also make the meanings of words clearer. All of these features help you better understand new or unfamiliar words.

When you learn how to take advantage of the many features of a dictionary and use it frequently, you strengthen your power to keep your vocabulary growing for life.

OBJECTIVE 1

1. You will be able to quickly locate the appropriate section of the dictionary in which a word is found.
2. You will be able to arrange given words in alphabetical order.

STRATEGY

1. Read IRS Booklet A-23, "Locating Words in a Dictionary", p. 2-3 only.

2. Place these words in alphabetical order on the basis of their first letters:

   cystocele, gastrocele, hydrocele, myelocele, arthodesis, leukopenia

   1) _____ 4) _____

   2) _____ 5) _____

   3) _____ 6) _____

   HELPFUL TIDBIT : Did you know that the suffix -cele means hernia or tumor?

3. Place these pairs of words in alphabetical order:

   1) hydrocele - hyperglycemia _____ _____

   2) encephalitis - enteritis _____ _____

   3) ileum - ileostomy _____ _____

   4) anenectomy - adenoma _____ _____

Check your answers with the answer key.

If you missed any of these pairs or any item in practice 2, see your instructor.

4. Where would you look in your dictionary for these words? Put an X for each word on the line under the correct heading, front, middle, or back.

	FRONT	MIDDLE	BACK
a) abdomen	_____	_____	_____
b) brachial	_____	_____	_____
c) syndrome	_____	_____	_____
d) dermis	_____	_____	_____
e) respiratory	___	_____	_____
f) spinal	_____	_____	_____
g) neuritis	_____	_____	_____
h) uterine	_____	_____	_____
i) organism	_____	_____	_____
j) plexus	_____	_____	_____
k) axillary	_____	_____	_____
l) tendon	_____	_____	_____
m) cholera	_____	_____	_____
n) vertebrae	_____	_____	_____
o) malnutrition	___	_____	_____

Check your answers with the key. Did you get all of them correct? Great! If you missed more than one see your instructor.

OBJECTIVE 2: Using Guide Words

You will be able to locate words in a dictionary by using guide words and alphabetical order.

STRATEGY

Read IRS Booklet A-23, "Locating Words In a Dictionary", p. 5-6.

PRACTICE 1: Locating Words In a Dictionary

In each box below, put an X before each word that you would expect to find on a dictionary page that has the guide words shown at the top of the box.

abdomen	arthritis
_____ abdominal	_____ atonic
_____ axilla	_____ abcess
_____ anemia	_____ amenorrhea
_____ alcoholism	_____ atrium
_____ adrenal	_____ appendicitis

cardiac	cornea
_____ cancer	_____ congenital
_____ ciliary	_____ coronary
_____ cavus	_____ cholera
_____ colonic	_____ cranial
_____ cervical	_____ corpuscles

leukemia	menstrual
_____ lymphatic	_____ myelogenous
_____ intestines	_____ malignancies
_____ menopause	_____ mucous
_____ lung	_____ malnutrition
_____ lymph	_____ myopia

spermatozoa	sprue
_____ spleen	_____ spine
_____ sensory	_____ spermatozoon
_____ symptom	_____ surgeon
_____ sporadic	_____ spermatic
_____ suprarenal	_____ spring

Check your answers. If you missed more than two, see your instructor. Otherwise, go on the next objective.

OBJECTIVE 3

You will be able to skim a dictionary entry and identify different parts of the entry in 8 out of 10 examples.

STRATEGY

Each word listed in a dictionary has a variety of information that goes with it. The word and all its information is called AN ENTRY.

Learn the different parts of a dictionary entry.

A B C D
re·tain (ri-tān') *v.* [ME < OF < L *re-back* + *tenere* to hold]

1: to hold on, keep in possession 2: to keep in a fixed state or condition 3: to continue to have or hold in E [to retain heat] 4: to continue to practice or use 5: to keep in mind 6: to hire or arrange in advance for the services of

A. The first thing to appear in a dictionary entry is the word itself in its correct spelling, and after divided into syllables. Re·tain is shown in two syllables.

B. The second thing listed in a dictionary entry is the pronunciation of the word. This part of the entry, when used with the pronunciation key (which you will study more closely in the next objective) will tell you how to pronounce the word. It will give you not only the sound of the letters, but the number of syllables in the word and which syllable(s) is/are accented.

C. The third part of the entry indicates part of speech. If a word may be more than one part of speech (such as run--*verb* - Run to the store. and run--*noun* - I got a run in my hose.), both symbols will be given (*v.* verb and *n.* noun). Other parts of speech are as follows on the next page.

adj. - adjective

adv. - adverb

prep. - preposition

conj. - conjunction

art. - article

pron. - pronoun

A	B	C	D
re·tain	(ri-tān')	*v.*	[ME < OF < L *re-back + tenere* to hold]

1: to hold on, keep in possession 2: to keep in a fixed state or condition 3: to continue to have or hold in [to E retain heat] 4: to continue to practice or use 5: to keep in mind 6: to hire or arrange in advance for the services of

D. The next part of the entry is the origin of the word, or where the word came from. In the example above you see ME < OF < L. This means the word came to us from Middle English, and before that the word was Old French, and before that it had a Latin base. The explanation of these abbreviations is in the front of the dictionary.

C and D are reversed in some dictionaries.

E. The last part of a dictionary entry is the actual meaning of the word. Often a word will have more than one meaning, and these will be listed in the order they are most frequently used. In other words, the first meaning listed would be a much more common use of the word than the tenth meaning listed.

NOTE: When you use a dictionary, you usually don't need to know all the information given in an entry. By knowing which part of the entry contains the information you need, and by looking directly at that part of the entry, you can save yourself a great deal of time and confusion.

EXERCISE

Below are 5 dictionary entries. On your paper, answer the questions asked about each entry.

1. sa·voy (s ə voi') n. [Fr. *cabbage of* Savoy] a kind of cabbage with crinkled leaves and a compact head

   Copy the pronunciation: _____

2. scraw ny (skrô' nē) adj. [Scand.] 1: very thin; skinny and bony 2: stunted or scrubby

   Copy the part of speech: _____

   What does that stand for? _____

3. skein (skan) n. [ME *skeyn* < MFr.] 1: a) a quantity of thread or yarn wound in a coil b) something like this, as a coil of hair 2: a flock of wild fowl

   Copy the origin of the word: _____

   How many syllables does the word have: _____

4. stel·lar (stel' ə r) adj. [LL *stellaris* < L. *stella*] a star 1: of the stars or a star 2: like a star, as in shape 3: by or as by a star performer; excellent, outstanding 4: leading; chief a *stellar* role

   What is the second meaning of the word? _____

   Copy the pronunciation of the word: _____

5. ten·et (ten' it) n. [L., *he holds* < *tenere*] a principle, doctrine, or belief held as a truth, as by some group

   How many syllables does the word have? _____

   What part of speech is it? _____

   What does the word mean? _____

SELF POST-TEST

For the following ten questions write on your paper which part of the entry is underlined.

1. Kob (käb) n. [< native name in Niger-Congo area, as in *Wolof Koba*] an orange-red antelope of SE Africa

   a. correct spelling and number of syllables (the word itself)
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

2. in·sure (in shoor') v. [ME. *ensuren*] 1: to contract to be paid or to pay money in the case of loss of (life, property, etc.); take out or issue insurance on (something or someone) 2: to give or take out insurance

   a. correct spelling and number of syllables (the word itself)
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

3. lei (lā) n. [Haw.] in Hawaii, a wreath of flowers and leaves, generally worn about the neck

   a. correct spelling and number of syllables (the word itself)
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

4. mome (mōm) n. [< ?] a blockhead, fool

   a. correct spelling and number of syllables (the word itself
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

5. mon·e·tize (män' ə tīz) v. [< L. *moneta* a mint + ize] 1: to coin into money 2: to legalize as money

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

6. o·men (ō' mən) n. [L. < OL. *osmen*] a thing or happening supposed to foretell a future event, either good or evil; augery

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

7. or·gan·ist (ôr' gə nist) n. [< MFr. or ML.] one who plays the organ

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

8. per·i·lune (per' ə lōon) n. [< peri + lune] the point nearest to the moon in the elliptical orbit of a man-made satellite in orbit around it

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

9. pied (pīd) adj. [ME *pyed*, orig. black and white like a magpie] 1: covered with patches or spots of two or more colors; piebald; variegated 2: wearing a garment of this description

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

10. plex·i·form (plek' sə form) adj. [< plexus + -form] like, or in the form of, a plexus or network; complex

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

OBJECTIVE 4: Using a Dictionary for Pronunciation

You will be able to use a pronunciation key to decide the correct way to pronounce a word.

STRATEGY 1

Read IRS Booklet B-3, "Using a Dictionary for Pronunciation" P. 2-3.

PRACTICE 1

Complete Practice 1 on page 4 of IRS Booklet B-3. Check your answers with Card B-3 at the back of the IRS box.

STRATEGY 2

Read IRS Booklet B-3, "Using a Dictionary for Pronunciation" p. 5-6.

PRACTICE 2

Beside each word in the first column below is the special spelling to show how the word is pronounced. Use the pronunciation key at the bottom of the page to decide how to pronounce each word. If the word has one syllable, decide what other word in that line has the same vowel sound in it, and put an X in the blank before that word.

If the word has two or more syllables, notice which syllable is stressed. What vowel sound does that syllable have? Put an X in front of the word that has the same vowel sound.

EXAMPLES:

*shirr (shûr)	____ hear	__X__ fur	____ hire
*rotor (rō' tər)	____ sun	__X__ no	____ hot

PRONUNCIATION KEY

ă pat/ ā pay/ âr care/ ä father/ ĕ pet/ ē be/ ĭ pit/ ī pie/ îr fierce/ ŏ pot/ ō toe/ ô paw, for/ oi noise/ ou out/ o͝o took/ o͞o moon/ th thin/ th this/ u cŭt/ ûr turn/ yo͞o use/ ə about/ zh pleasure

1.	trachy (trā' ke)	___ key	___ fry	___ gray
2.	-stasis (stā' sis)	___ sweet	___ grape	___ suit
3.	foist (foist)	___ coil	___ toad	___ mouth
4.	cerumen (se rōō' men)	___ must	___ rude	___ roll
5.	poly- (pŏl' ē)	___ fed	___ bone	___ hot
6.	rrhea (rē' ah)	___ wide	___ chest	___ feet
7.	hyper (hī' per)	___ wipe	___ wet	___ clean
8.	-ptosis (tō' sis)	___ coat	___ tent	___ need
9.	saccharo (săk' ah ro)	___ game	___ fast	___ bend
10.	plumb (plŭm)	___ tune	___ would	___ cup
11.	iso (ī' so)	___ hut	___ time	___ ruin
12.	-tomy (tō' me)	___ born	___ cone	___ shop
13.	cache (kăsh)	___ ball	___ lad	___ rain
14.	rrhexis (rĕk' sis)	___ her	___ team	___ red

PRONUNCIATION KEY

ă pat/ ā pay/ âr care/ ä father/ ĕ pet/ ē be/ ĭ pit/ ī pie/ îr fierce/ ŏ pot/ ō toe/ ô paw, for/ oi noise/ ou out/ ŏŏ took/ ōō moon/ th thin/ th this/ ŭ cut/ ûr turn/ yōō use/ ə about/ zh pleasure

Did you get 12 or more correct? Good! If not, see your instructor before going on.

OBJECTIVE 5: Using a Dictionary to Get Meaning

You will be able to choose the meaning that makes the most sense in a given sentence from several meanings stated in a dictionary entry.

STRATEGY

Read IRS Booklet A-17, "Using a Dictionary to Get Meaning", pp. 2, 3, 5.

PRACTICE: Complete the practices on pp. 4, 6, and 7. Check your answers with Card A-17 at the back of the IRS box.

If you got 27 or more correct, go on to the next unit. If you missed more than three (3), see your instructor.

OBJECTIVE 6

You will be able to name three sources besides a dictionary which help you find exact meanings of words and identify the location of these sources in materials used in your vocational program.

STRATEGY

1. Read the phrases below. Each one tells about a term in Health Occupations that is important to know. (Numbers c and f are thrown in for good measure - See if you can figure them out.) The first letter will help you. Write the word in the blanks. You may use a dictionary.

a. the study of nerves

N _ _ _ _ _ _ _ _ _

b. medical term for the flu

I _ _ _ _ _ _ _ _ _

c. What weighs many tons but falls without making a sound?

S _ _ _

d. instrument for looking at miniature objects

M _ _ _ _ _ _ _ _ _

e. one who does surgery

S _ _ _ _ _ _

f. What planet do we see more often than any other planet?

E _ _ _ _

g. inflamation of a joint

A _ _ _ _ _ _ _ _

h. fear of water

H _ _ _ _ _ _ _ _ _ _ _

Now look at the starred (*) boxes. They spell the answer to this question: What is the closest place to look up the meaning of a word found in a textbook?

— — — — — — — —

CLUE: A list of words and their meanings and is usually found at the back of the book. Look at the sample glossary at the end of this packet.

2. One of the first things you should check when you get a textbook for one of your classes is whether or not it has a glossary.

   Use a glossary in one of your texts or the one in Appendix A (at the end of this packet) to answer the following questions:

   a. Words are listed in _____ order.

      Yes, alphabetical order is correct.

   b. An entry for a word usually gives _____ (number) definition(s).

   c. Definitions for the words are (choose one):

      1. general
      2. specifically related to the subject you're reading about

      Did you answer that there is usually one definition? Though the word may have several possible definitions, the glossary usually lists only the specific meaning as related to the subject you're reading about.

3. There are other ways of using your book to find out the precise meanings of words. These ways are reviewed below.

   a. Index

      This is usually located at the very end of the book. It tells you on what page (or pages) you can find specific information the book contains. A good index lists every subject that is discussed in the book. (For further explanation of an index, see IRS booklet A-25).

   b. Footnotes and Context

      Many times the author gives the definition for a technical word* on the same page, as is being done in this sentence. Sometimes, the authors include the meanings of words within the text material. Pay attention to the style and color of the print. These clues all save you from having to interrupt your reading further by turning to the back of the book or looking the word up in the dictionary. If the word is written in dark, heavy print, it is usually very important to your understanding of the paragraph. If the definition for a word is not given on the same page, check the glossary or the index at the back of your book.

4. The rule of thumb is to look for the closest available source for looking up the meaning of a word. Place these sources in order of their closest location:

   glossary, dictionary, index, footnotes/or context

   1) _____

   2) _____

   3) _____

   4) _____

* A word related directly to a particular subject area.

APPENDIX A - HEALTH OCCUPATIONS GLOSSARY

Some of the new words which you have read in this book.

Abdomen. The belly.
Anthrax. Disease of cattle and sheep which may attack man.
Antibiotic. Substance produced by a living organism which kills germs or stops them growing.
Antibody. Substance in the body which gives immunity.
Antiseptic. A substance that kills or stops the growth of germs.
Antitoxin. A substance which causes poison to lose its effect.
Bacterium (plural: *bacteria*). Tiny organism consisting of one cell only. Belongs to the plant world.
Capsule. A covering skin.
Carbolic Acid. A very strong antiseptic made from coal tar.
Colony. Collection of germs in a culture.
Cowpox. A virus disease causing blisters on cows' udders.
Culture medium. A substance on which germs may grow.
Cultured. Allowed to grow on a culture medium.
Cytoplasm. The substance of a cell excluding the nucleus.
Digestive system. The part of the body where food is broken down into particles small enough to be absorbed into the bloodstream.
Disease. Illness or sickness.
Epidemic. An infective disease attacking many people at the same time.
Flagellum (plural: *flagella*). A hairlike structure on an organism.
Fungus. A cellular organism which lives on dead plant or animal matter.
Immunity. The ability to resist infection or poisoning.
Immunized. Made resistant.
Incubate. Provide suitable conditions for the growth of organisms.
Incubation period. The interval between infection and the appearance of disease.
Infection. The introduction of germs to the body.
Inflammation. The changes taking place in tissues which are infected.
Malaria. A disease due to protozoa which destroy the body's red blood cells.
Membrane. A thin layer of tissue.
Mucous membrane. The lining of cavities in the body such as the mouth and nose.
Nucleus. The controlling center of a cell.
Organism. A living thing, plant or animal.
Pasteurization. A special process for sterilizing milk.
Peritonitis. Inflammation of the inner lining of the abdomen.
Plague. A disease of rats which is carried to humans by rat fleas.
Pneumonia. Inflammation of the lung.
Protein. A substance which comes from food and is essential to a living cell.
Protozoa. The simplest forms of animal life.
Pus. Liquid which is formed when inflammation takes place.
Rabies. A disease of dogs which may affect humans.
Respiratory system. The parts of the body concerned with breathing.
Smallpox. A severe virus disease of humans.
Sterilize. To free from germs.
Tissue. A collection of similar cells.
Toxin. Poison formed by an animal or plant.
Vaccines. Killed or altered germs used to produce immunity to disease.
Virulent. Able to overcome the body defenses.
Viruses. Tiny organisms which cause disease but can only multiply in living cells.

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personal achievement

READING

Mastering Technical Vocabulary

HEALTH OCCUPATIONS

Revised by Janet R. Swinton from Ellen Lamar Thomas and H. Alan Robinson, *Improving Reading in Every Class: A Sourcebook for Teachers*; copyright by Allyn and Bacon, Inc., 1972, pp. 297-304. Reprinted with permission. Some word changes have been made for easier reading.

PRE/POST TEST
MASTERING TECHNICAL VOCABULARY

STRATEGY 1

List at least three (3) ways an author may alert you to important terms in your text.

1. _____

2. _____

3. _____

STRATEGY 2

List at least eight (8) things to do to learn a new technical term.

1. _____ 5. _____

2. _____ 6. _____

3. _____ 7. _____

4. _____ 8. _____

STRATEGY 3

Explain what the "divided page glossary" is, and how it may help you learn new terms.

STRATEGY 4

Explain what a "cover card" is, and how it may help you learn new terms.

STRATEGY 5

Explain how using your auditory and motor channels help you remember new terms.

STRATEGY 6

Mark the following statements True or False

____ Your greatest time for forgetting is within 24 hrs. after you first heard something.

____ It is a good idea to review a previous assignment immediately before going on to a new assignment.

____ It is better to study an assignment once, for a large amount of time, then several times for shorter amounts of time.

STRATEGY 7

Explain why you should set your own goals for learning new vocabulary.

MASTERING VOCABULARY

Here's a method that can help you lift your vocabulary well above its present level. It's tailored to your individual preferences. You decide the words you want and need. You collect them when time is available, and not when it isn't. You set your own goals and move toward them as you wish. This method will help you not only learn, but also remember the meanings of new vocabulary words.

HOW TO MASTER THE VOCABULARY OF HEALTH OCCUPATIONS
(Put These Tips to Work, and Your Dividends May Be Dramatic)

As you begin a new course in Health Occupations, it may seem as if you're learning a foreign language. Difficult new technical terms crowd the pages. Easy, familiar words appear with unexpected new meanings. The everyday word between suddenly becomes technical - with an extremely precise meaning! The word exactly takes on a special meaning - even any, if and or.

Rote memory is no longer enough. You must gain a working understanding - learn to use the new "word tools" well and intelligently. Once an unfamiliar word is defined, or a familiar word defined again, the authors will use it again and again, taking it for granted that you understand it. If you pass over these new terms lightly, word blocks will soon get in the way of your learning. Your reading will become an obstacle course. Learn the new terms thoroughly when they're introduced, and you'll be able to grasp essential new knowledge for use in your courses and work.

Clearly, our vocabulary abilities now become a tremendous asset. Fortunately, learning experts - in actual experiments with students - have researched learning and memory techniques. Some of the strategies suggested here are based on years of experimentation in the psychology of learning.

STRATEGY 1:

How Will the Author Alert You to Important Terms?

When key terms or concepts are first introduced to you in textbooks, the authors usually flag you with a conspicuous signal. The signal used may be heavy black (boldface) type, italics, color, and underlining. Words signalled in these ways are crucially important "official" Health Occupations terms.

In the passage below, the authors make an important term stand out on the page by underlining it.

S T O P !
L O O K !
L E A R N !

Biology is the science that deals with living organisms. The branch of biology dealing with microbes - that is, organisms structured as one cell and studied with the microscope - is microbiology.

ACTIVITY

Scan your own textbook and see how the authors signal important new terms. List those ways on a separate sheet of paper.

Sometimes there is an "explosion" of new words - like the one below - in a very brief space. Yet every new term is basic for your future learning and calls for thorough learning and remembering.

TOOLS FOR FUTURE LEARNING

The nuclear membrane separates the nucleoplasm (protoplasm of the nucleus) from a zone of less dense spongy protoplasm surrounding and suspending the nucleus, known as the cytoplasm.*

STRATEGY 2:

TIPS FOR LEARNING DIFFICULT TECHNICAL TERMS

1. Pay attention to each term when it first appears. Read so that you understand the definition - not to memorize, but to get a real understanding of the meaning.

2. Take a new word apart if you can. Do you recognize a familiar part? If, for example, you recognize the familiar prefix poly-, meaning many, you already have a hold on polygamist, polygraph, polyglot. If you recognize the word part, equi-, meaning equal, it helps you unlock equidistant, equivalent, and equation. The familiar prefix, co-, meaning with or together with, can help you understand coordinate, cooperate, and co-worker. (See Unit I for more word part clues.)

3. Read and reread as often as is necessary. Reading-once-straight-through patterns are not very helpful. Complete stops are called for frequently. Thought time is essential in addition to reading time.

4. The authors' definition of a new term is almost always followed by examples. Examine these examples and figure out whether in fact they do follow the definition.

*Reprinted from Microbiology and Pathology, Alice Lorraine Smith, C.V. Mosby Company, Saint Louis, 1972, pp. 3 and 13.

5. Try to think of counter examples, examples which do not come under the definition. When thinking of these, you may find it helpful to change a word or two in the definition.

6. Read the definition as you read all Health Occupations materials, pencil in hand. Make notes and create your own examples.

7. Suppose as you are reading the definition of the new term, you come across a technical term you've already met in the course whose meaning you don't remember. We all forget! You have the meaning right at your fingertips through the index for instant access to the original explanation of the forgotten term.

8. As you're working with the new term, try to express its meaning in actual words - your own words.

9. You may find a "List of Some Important Terms to Learn" toward the end of each chapter. You'll want to check your understanding of this list of terms. The terms the authors have selected for this list are crucial. You may also want to check your own list of key words and their meanings.

10. Make an effort to use your new Health Occupations terms.

In Summing Up

1. Read to understand.
2. Look for familiar word parts.
3. Reread.
4. Study the examples.
5. Make up counter examples.
6. Be active with your pencil.
7. Use your index.
8. Self-recite.
9. Review
10. USE YOUR NEW LEARNINGS

STRATEGY 3:

1. MASTERY OF NEW TERMS

Should you memorize the meanings of new terms? Chances are you won't need to. Memory of the meanings of new words will often come about naturally as you go over the material, reread, do problems. This is not to encourage half-learning of essential terms. Terms in Health Occupations are defined rigorously. It's essential to get strict meanings in mind. Remembering a very close version of what has been said will be a tool in future learning and on your job.

2. KEY WORDS SHOULD BE "COLLECTOR'S ITEMS"

Set aside a section of your notebook as a Health Occupations Glossary. As you run across each new key term, collect it for your glossary. Keep this record up to date from day to day. Take about two minutes - that's all you'll need - to make each entry.

You may find the "divided page" handy. Make a line down the middle of a page in your notebook. In the Key Term column to the left, record the new word. In the Meaning column to the right, write the meaning carefully.

The divided page is handy when review time comes. The dividing line makes it possible to conceal the meaning completely as you check your understanding of a term later.

Mark the end of each unit - perhaps with a double line. Now when you want to go back and check on the new words you've studied in a certain unit, you'll know exactly where to find them.

If you were to do nothing more than record the new words you'd met in a unit and then lose your glossary, you would still have an advantage. The muscular act of writing, in and of itself, would have already strengthened your learning.

THE "DIVIDED PAGE"

KEY TERM	MEANING
	Test your understanding by covering this side.

ACTIVITY

Turn to a chapter you are presently studying in one of your course textbooks. Locate and record ten (10) key terms and their meanings in your glossary. Congratulations! . . . you now have the beginnings of a helpful tool. Use it as you read further for class.

STRATEGY 4:

USE THE "MOST POWERFUL STUDY TECHNIQUE"

Students often ask, "How can I retain what I study?" You can learn for the future with the most powerful study technique known to psychologists!

Conceal the right-hand side of your divided page with your hand or with a cover card (index card) and try to express the meaning - not by memory, but with full understanding of what you are saying. Then lift the card and check. Continue checking until you have full understanding. Mark items that are especially difficult, and double-check these next time.

You'll find a cover card handy in other ways. Using a card to work through chapters as you review is often more effective than rereading. You can reread materials and dream all the way through. The cover card forces you to concentrate as you struggle to recall what's underneath.

STRATEGY 5:

USE YOUR SENSES FOR FASTER, FIRMER LEARNING

Multisensory study can speed and strengthen your learning. Eyes are just one of your learning channels. Use your eyes only, and you turn on just one-third of your sensory channels for mastering a new term. What other learning channels can you use? Your auditory and motor channels.

"SEE IT!
SAY IT!
HEAR IT!
DRAW IT OR WRITE IT!"

As you study, see the material as you read the word and think about its meaning.

Then say the new term and formulate its meaning aloud or in a whisper. Now you're adding kinesthetic learning. As you form the sounds, the muscles of your throat, tongue, and lips are reinforcing your memory.

And as you say it, hear it. Now you call in hearing, another learning channel.

Draw a figure to illustrate the term or write down its meaning. Now you bring more learning power into play - your motor equipment. Write down just a key word or two in the definition as you express the meaning to yourself. Pencil work helps concentration; it has a "no-doze" effect.

Any writing you have already done - on a scratch sheet or on the divided page - has already reinforced your learning.

"See it! Say it! Hear it! Draw it or write it!" is all-out study - a four-way reinforcement. The variety itself helps you recall. The change of pace - eyes, ears, voice, pencil - keeps you alert and increases the amount you learn.

ACTIVITY

Use the technique you've just read to learn the ten (10) words on your glossary list. When you feel confident that you know the words, see your instructor for a post-test.

STRATEGY 6:

TO RETAIN LONGER, SPACE OUT YOUR REVIEWS

You can remember longer simply by the way you place your reviews. You can place your first review to minimize forgetting. Suppose you read you class assignment today. When will forgetting take its greatest toll? If your forgetting is typical, the greatest loss will be within one day. Arrange your first review to check this drop. Place it from 12 to 24 hours after you study your vocabulary terms. Reinforce immediately, and you will remember much longer. It might be a good idea to review the previous assignment immediately before going on to the new assignment.

A study expert pointed out the "Curve of Forgetting" to military officers returning to academic study after being out of school for several years.

The first student studied one hour on September 30, and six weeks later remembered very little.

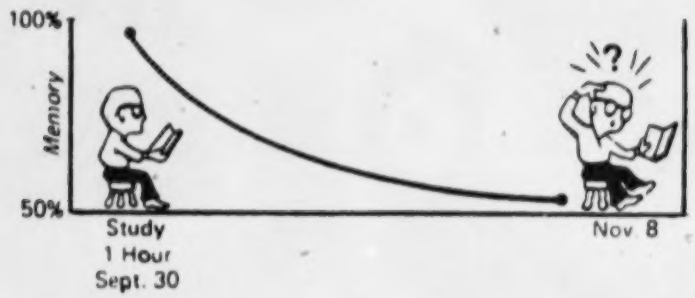

FIGURE 6-7. Curve of forgetting. (Drawing reproduced by permission of Dr. Staton.)

* Thomas F. Staton, *How to Study* (Montgomery, Alabama: Box 6133, 1968), p. 39. The drawings are reproduced with permission.

The second student studied only 30 minutes on September 30, but he spaced out his reviews - 15 minutes on October 1 and 10 minutes more on October 8. On November 8 it took this student just a 5 minute review to bring back what he wanted - with 100% mastery.

FIGURE 6-8. Spaced reviews. (Drawing reproduced by permission of Dr. Staton.)

Both students studied just one hour, but the one who spaced out his reviews had far better retention.

Your glossary of terms lends itself to spaced review. You can have a quick run-through waiting for a friend, riding to school, waiting for a bus, between classes, just before a test.

Take care, though, that your run-throughs don't become unthinking, mechanical, repetitions. Your instructors hope that as you review your terms and their meanings, you will focus on what the definition is really saying. They sound this warning: though precise understanding is absolutely essential, too much stress on memorization of words may destroy your understanding of their real meanings.

You'll find that spaced-out reviews will pay you high dividends in aspects of Health Occupations other than vocabulary and in other school courses as well.

LEARN THE NEW TERMS FROM DAY TO DAY!
THEY'LL BE YOURS TILL THE LAST DAY
OF THE COURSE - AND BEYOND - AS TOOLS
FOR GRASPING ESSENTIAL NEW KNOWLEDGE.

ACTIVITY

Review the same ten (10) words you were tested on at one and two weeks from today. During the fourth week, give yourself a quiz to see how much you remember at that point.

STRATEGY 7:

SET YOUR OWN GOALS FOR VOCABULARY

Only you can set goals for yourself! Only you can move toward them!

If you've decided to start a personal word collection, please set goals for yourself as suggested below. You'll want to consider your test score, your own judgement as to what you need, and any suggestions from your teacher.

The goals you set today are only tentative. You may wish to change them as you make progress. Your goals should be realistic. Planning more than you can possibly attain brings only disappointment.

Your teacher will discuss your goals with you.

TO IMPROVE VOCABULARY:	PLANNED	FINISHED
1. How many words do you plan to have in your personal word collection (and really learn) before the end of this month?	_____	_____
2. Have you decided to collect a definite number of words each day? week? If so, what is your quota?	_____	_____
3. Some students prefer not to set a daily or weekly quota, but to collect their new words whenever the reading they are doing at the moment lends itself. If this is your decision, indicate by checking here: _____		

ANSWER KEY
PRE/POST TEST
MASTERING TECHNICAL VOCABULARY

STRATEGY 1

1. heavy type
2. italics
3. colon, also underlining

STRATEGY 2

any 8 of the following

read to understand
look for familiar word parts
reread
study the examples
make up counter examples
be active with your pencil
use your index
self-recite
review
use your new words

STRATEGY 3

Divided page glossary is a form used to make your own glossary, with terms written on one side of the page and their meanings on the other. It is an orderly way to collect, store, and learn new terms.

STRATEGY 4

A cover card is simply a card used to cover up meanings or terms to check your memory when you are trying to learn terms. It helps you concentrate on what you are studying.

STRATEGY 5

By using your sight, voice, hearing, and muscles to study a word you learn the word through a variety of senses and therefore learn the word better.

STRATEGY 6

T, T, F

STRATEGY 7

By setting your own goals, what you learn is meaningful to you, and applies directly to your needs.

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